THE COLEOPTERA OF SOUTH AFRICA.

PART II.—CARABIDÆ.

DISTRIBUTION IN SOUTH AFRICA.

THE distribution of *Carabida* in Central Africa is not yet sufficiently known to enable one to decide where the points of contact of the South African fauna are to be found, but in this family, as in all others, the influence of the Ethiopian region is unmistakable. Most of the genera found in Abyssinia, Somaliland, and the Galla country are also represented in the eastern part of South Africa, and I doubt not that most of the species, as well as genera recorded from the Zanzibar mainland, will also be found in Zambezia. The affinity between the Senegambian and South African fauna is also indubitable, but it is of a much less distinct type than the Ethiopian one, and a few West Coast African forms are also met with on the boundary, so to speak, of the eastern part of the Cape fauna.

The influence of the Ethiopian region seems to end at Port Alfred, at about 17° E. Long., along a narrow sea belt, having a subtropical fauna and flora. This South African eastern fauna spreads over the Gaza country, Mozambique, Zambezia (which includes Mashuna and Matabele lands, with part of Manica), the whole Transvaal, Zulu and Amatonga lands, Natal, and that part of the Orange Free State west of 27° E. Long.

Western South Africa, as divided by that line, has a peculiar fauna of its own extending over the Cape Colony, Great Namaqua and Damara lands, and the Kalahari or southern part of N'Gamiland. It is in these parts that most of the genera, strikingly peculiar to South Africa, are found; and throughout the same area representatives of the Ethiopian region are scarce.

North of 23° S. Lat. the swampy region of Lake N'Gami makes its influence felt, and there the two South African faunas unite across the continent.

It is worthy of note that this defined area applies not only to the carabidous fauna, but also to the whole of the South African Coleoptera, as I hope to be able to show when treating of the other families. On the whole the carabidous fauna is an African one, out of 466 genera, 55 only are South African, but of these 24 may be said to be very distinct and typical, and 22 of these belong to the western fauna. This seems to lead to the conclusion that the Cape fauna has not been the centre of distribution from which the African species have sprung.

Lacordaire has divided the family into 39 tribes, and Horn in 38; 31 of those have representatives in South Africa.

The *Carabides* are represented by one genus only—*Calosoma*. The caraboid form of that genus, met with in Eastern Africa and Abyssinia, has not yet been recorded from the South African region.

The *Hiletides*, which include one genus only (*Hiletus*), have one representative.

The *Promecognathides* are represented by *Axinidium*, a very curious Western South African form, the only congener of which inhabits California.

The distribution of *Carabidæ*, inhabiting marshy places or damp, herbaceous localities, is difficult to define; but they are, of course, rarer in the dry plains of the Karoo and Little Namaqualand.

The *Omophronides* have 4 representatives, 2 of which seem restricted to the western fauna.

The Lachnophorides, Galeritides, Brachinides, Odontocanthides, and Helluonides number 64 genera and 279 species. Their occurrence in the western part is only occasional, but representatives of these tribes are met with along the seaboard as far as 19° E. Long.

The Lebiides are widely spread, but 4 genera of the group Cymindidæ are of a purely western type. The great number of species of the genus Phlæozetus (21) and Lebia (26), in the group Lebiidæ, is very remarkable; they appear to be divided between the two faunas; this is surprising, because wood and underwood is comparatively scarce in the western part; but it may be that they are more easily distinguished and captured on account of that scarcity of wood.* The Arsinoë and Coptoptera are fairly numerous (8 and 7 respectively) and a Pentagonica has also been discovered lately. The group Dromiidæ includes 16 genera and 39 species, which cannot be said to have a restricted distribution.

The typical feature of the South African fauna is the great number of *Graphipterus* and *Piezia* included in the tribe *Graphipterides*. They abound in all parts of South Africa, but are numerous in the Karoo, and still more so in the Kalahari region. It is worthy of note that the species with dilated and compressed antennæ have not been found south of 27° S. Lat., and the genus *Piezia*, which has similar dilated and compressed antennæ, does also not occur south of

* It is well known that the *Lebiidæ* are generally captured by beating boughs or branches of trees, or are met with under decayed bark.

that region. The number of *Graphipterus* recorded is 86, and that of *Piezia* 15.

Next to the *Graphipterides*, the *Anthiades* are also a conspicuous feature of the South African fauna. They include 8 genera and 81 species. Two of the genera belong to the western fauna only, but the facies of a group of the genus *Anthia*, restricted to this western part, is very different from that of some of the eastern forms. The genus *Polyhirma* is essentially eastern, not having yet been met with beyond 28° S. Lat.; but north of that limit it occurs on both the western and eastern sides, the habitat of some species being very limited, while others range from Damaraland to the Victoria Falls on the Zambezi, and even Mashunaland.

The *Morionides* are represented by 2 genera; one, *Morio*, a wellknown West African form; the other, *Stereostoma*, originally described from specimens collected in Zululand, and found also in Central Western Africa.

The *Scaritides* are very numerous. They are represented by 14 genera and 57 species. They include several species found in Africa, and one blind species of the genus *Reicheia* has been found near Cape Town; 6 of the genera are purely South African, and 5 of them are restricted to the western area.

The *Siagonides* are represented by the genus *Siagona*, with 3 species, all belonging to the eastern fauna.

The tribe *Apotomides* is represented in South Africa by the European genus *Apotomus*. In this tribe I have included, not without some misgivings, the South African genus *Bascanus*, with 2 species.

The *Harpalides*, numbering 17 genera and 110 species, are evenly distributed; 4 genera seem to be peculiar to South Africa. I think myself justified in establishing a tribe for the genus *Geobanus*, on account of the clothing of the under part of the tarsi. This genus is represented in South Africa by 3 species.

The *Panagaides* include 6 genera and 23 species. They all belong to the eastern fauna. Some species are found on shrubs, but they are generally met with under stones or in damp localities.

The *Chlanides*' range is a very wide one, and this accounts probably for the great number of species found in South Africa, *i.e.*, 100 included in 8 genera. Of this number 15 species only occur in both the western and eastern parts, and several Senegambian species are also met with in South Africa. The genus *Collistominus* has 8 representatives.

The *Licinides* are represented by 2 genera, each with one species. Both genera *Rhembus* and *Badister* have a very wide range, being met with near Cape Town and Rikatla (Mozambique), and Cape Town and Salisbury (Mashunaland) respectively.

The Stomides have one genus as representative, i.e., Sphæricus.

But the 2 South African species have a different facies from their congeners from Senegambia and Central Africa.

The *Masorcides*' range is very wide. Three genera are represented in South Africa, but none is indigenous.

The *Pterostichides* have very typical South African representatives. Of the 8 genera, including 48 species, 1 is typically western and 3 eastern, but 17 species are restricted to the western fauna; 1 genus, Teratotarsa, with 1 species, and also Pterostichus Severini, have as yet been met with on Table Mountain only. This is so much more singular that there is at the Cape neither an Alpine nor a sub-Alpine fauna, yet I know of several Coleoptera which are found on Table Mountain only or on the Table Mountain range, and which are quite unknown elsewhere, among them being a most typical Scaritid—Pachyodontus languidus. I did hope at one time that the Drakensberg range might have such an Alpine or sub-Alpine fauna, but I have now good reasons to believe that such is not the case. In fact the high plateaux of the central part of South Africa are reached by terraces, and the climatic conditions prevailing are a bar to the possibility of an isolated fauna holding its own against newcomers from the surrounding parts.

The *Platynides* are fairly numerous, 8 genera and 27 species. One genus, *Læmosthenus*, is very probably an importation of recent date, and so far as I have been able to ascertain L. *complanatus* is restricted to the neighbourhood of the coast ports. The tribe includes the genus *Euleptus*, originally described from Madagascar and also met with in the Himalayan range.

The *Pogonides*, represented by 3 genera—one South African—and 10 species, do not call for special remark.

The *Bembiides*, which number 4 genera and 22 species, have a very wide distribution; certain species occur also on the Zanzibar mainland. One of them is reported to be found in New Caledonia. A species of the absolutely eyeless genus *Scotodipnus*, recorded only from Europe, occurs also near Cape Town. This species, *S. capensis*, is, with the exception of *Reicheia Promontorii*, the only anophthalmous beetle as yet recorded from South Africa. But while in *Scotodipnus* the eye has completely disappeared, in *Reicheia capensis* the eye has become rudimentary, being reduced to one facet only. I have ascertained, however, that this insect is completely blind.*

To some it may seem premature, with our present knowledge, to tabulate the distribution of the Coleoptera in South Africa, yet after 15 years' work specially directed to a consideration of the occurrence of Coleoptera in that part of the world, I feel almost certain that future researches will not show reason for much alteration being made in the tables now presented, except that some of the South

* In the genus *Heterillus* the eyes have only a few facets.

African genera will probably be found to extend further than the South African limit, and this mainly in the eastern side.

At present the *Carabidæ* found in South Africa number 899, included in 166 genera, and of these 31 genera and 341 species are described for the first time.

The genera known to occur in South Africa only are :---

| | OMECOGNATHI | DES | | CARITIDES |
|-----------|------------------|-----|----------|--------------------|
| Genus A | AXINIDIUM | | Genus | MACROMORPHUS |
| Tribe EGI | IDES | | ,, | Pachyodontus |
| | AMŒBÆA | | ,, | PASSALIDIUS |
| | | | ,, | Acanthoscelis |
| Tribe LEI | | | ,, | Otophthalmus |
| Genus V | WAHLBERGIA | | " | Bohemania |
| ,, S | Selousia | | Tribe AI | POTOMIDES |
| ,, ľ | Metaxymorphus | | Genus | Bascanus |
| | LACHANISSUS | | Tribe H | ARPALIDES |
| ,, (| CALLIDOMORPHUS | | | Encephalus |
| ,, I | PERIPHOBUS | | | Agriodus |
| ,, I | Iystrichopus | | ,, , | PSEUDOSELENOPHORUS |
| | Anarmosta | | ·, · | Omostropus |
| | HAPLOPEZA | | | HARPALOMORPHUS |
| ,, S | Syndetus | | miho OT | EOBÆNIDES |
| ,, Σ | Xenitenus | | | GEOBÆNUS |
| · · · | Coptoptera | | | |
| ,, , ł | XLEPTERUS | | | ILÆNIDES |
| ,, ł | KLEPSIPHRUS | | | Zeloticus |
| ,, A | ASTASTUS | | | EROSTICHIDES |
| ,, A | AUTOMAIMUS | | Genus | Atimus |
| ,, S | Syngiliomimus | | ,, | Exocus |
| ,, I | ROMECOCHILA | | ,, | Cyrtomoscelis |
| ,, N | ATABELE | | Tribe PL | ATYNIDES |
| · · · | LYPHODACTYLA | | Genus | Rhopalomelus |
| ,, Т | TILIUS | | ,, | Procletus |
| Tribe ANT | THIADES | | ,, | TIMORETICUS |
| | ECCOPTOPTERA | | ,, | Enoicus |
| | ATRACTONOTA | | ,, | Angionychus |
| | AICROLESTIA | | Tribe PO | GONIDES |
| · · · · | CYCLOLOBA | | | Extremus |
| | BÆOGLOSSA | | ,, | HETERILLUS |
| ,, | | | ,, | |

The following table is the result of my record of localities and identification of the genera and species. It illustrates, as far as we yet know, the division between the eastern and western parts of the South African fauna, and shows the number of South African genera and species as well as their distribution, and also that of the genera represented elsewhere than in South Africa. The habitat of such genera will be found embodied in the text.

Descriptive Catalogue

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| | Genera. | | | | Species. | | | | |
|------------------|-------------------|-------------------|----------------------------|---------------------------|----------|-------------------|-------------------|----------------------------|--------|
| Tribe. | Western fauna. | Eastern fauna. | Eastern and Western. | Represented elsewhere. | TOTAL. | Western fauna. | Eastern fauna. | Eastern and Western. | TOTAL. |
| Omophronides | | | | . 1 | 1 | 2 | 2 | •• | 4 |
| Carabides | | •• | •• | 1 | 1 | • • | 2 | 2 | 4 |
| Hiletides | | • | | 1 | 1 | •• | 1 | • • • | 1 |
| Promecognathides | 1 | | •• | •• | 1 | 1 | •• | •• | 1 |
| Lachnophorides | | | •• | 1 | 3 | •• | 3 | | 3 |
| Egides | | 1 | •• | 1 | 2 | • • | 1 | | 1 |
| Hexagonides | •• | | •• | 1 | 1 | •• | 4 | •• | 4 |
| Odontocanthides | | •• | •• | 2 | 2 | 1 | 13 | ••• | 14 |
| Galeritides | •• | •• | •• | 5 | 5 | | 16 | | 16 |
| Helluonides | •• | •• | ••• | 4 | 4 | 1 | 11 | ••• | 12 |
| Brachinides | •• | | •• | 5 | 5 | 16 | 32 | 4 | 52 |
| Lebiides | 5 | 13 | 3 | 26 | 47 | 47 | 123 | 11 | 181 |
| Tetragonoderides | | | •• | 3 | 3 | 1 | 5 | 1 | 7 |
| Orthogonides | | | | 1 | 1 | | 4 | ••• | 4 |
| Graphipterides | | | •• | 2 | 2 | 30 | 64 | 7 | 101 |
| Anthiades | 2 | 1 | 1 | 4 | 8 | 27 | 50 | 4 | 81 |
| Morionides | | | | 2 | 2 | | 1 | 1 | 2 |
| Scaritides | 6 | 1 | | 7 | 14 | 22 | 30 | 5 | 57 |
| Siagonides | | •• | | 1 | 1 | | 3 | | 3 |
| Apotomides | 1 | | | 1 | 2 | 2 | 1 | | 3 |
| Harpalides | 3 | 2 | 1 | 11 | 17 | 28 | 66 | 16 | 110 |
| Geobænides | | | 1 | | 1 | 2 | · | 1 | 3 |
| Panagæides | | | | 7 | 7 | | 21 | 1 | 22 |
| Chlænides | | 2 | | 6 | 8 | 13 | 72 | 15 | 100 |
| Licinides | | | ••• | 2 | 2 | | •• | 2 | 2 |
| Stomides | | | | 1 | 1 | | 1 | 1 | 2 |
| Masoreides | ••• | | | 3 | 3 | | 1 | 2 | 3 |
| Pterostichides | 1 | 3 | | 4 | 8 | 17 | 28 | 3 | 48 |
| Platynides | 2 | 3 | | 3 | 8 | 9 | 15 | 3 | 27 |
| Pogonides | | 1 | | 3 | 4 | 4 | . 6 | 1 | 10 |
| Bembidiides | 1 | | | 3 | 4 | 3 | 15 | 3 | 21 |

HABITS OF SOUTH AFRICAN CARABIDÆ.

The habits of the South African carabidous beetles are quite similar to those in other localities, and no new light is thrown on their peculiarities from a study of the South African forms. The smell emitted by *Rhopalomelus* and *Procletus* when fearing capture is reported to be very nauseating. The former is found in white ants' nests, feeding on Termites. Most, if not all, the South African *Anthia* emit an acrid, very volatile fluid, producing a stinging sensation on the face and hand, and able to produce temporary blindness. The allied genera *Polyhirma* and *Microlestia* do not appear to possess that power, but the latter stridulates very audibly when captured, and one of my correspondents is quite certain that the *Graphipterus* found in Mashunaland also discharge a pungent volatile fluid. I have not, however, been able to corroborate this observation among our southern species.

PROTECTIVE RESEMBLANCE.

One would hardly expect to find much protective resemblance or mimicry among the *Carabida*, the livery of which is, with some exceptions, of a very inconspicuous hue. Yet we have in South Africa cases of colour-resemblance to general surroundings extremely noticeable in the genus *Graphipterus*. These beetles are very flat and extremely agile, and the upper part of the body is covered with a thick, very short pubescence, which harmonises wonderfully well with the colour of the ground, and may vary in individuals of the same species from localities far apart, between an almost ochreous red and dark grey, according to the colour of the soil. Where the background of the elytra is not relieved by semi-denuded bands or patches, the insect is well-nigh indistinguishable from the surrounding soil.

In the genus Ega (tribe Egides) we find a most striking resemblance to an ant, and the two species of Eccoptoptera (tribe Anthiades) are singularly like some of the large female Mutillæ (a Hymenopterous insect), which occur also in the same localities. There is no proof as yet that the mimicry in this last case could be of any value to the carabidous insects, but it is not improbable that a resemblance to the armour-clad Mutilla, which is provided also with a most powerful stinging apparatus, may be of use to the Eccoptopterafor protection from enemies, just as much as the nauseating smell emitted by Rhopalomelus protects it against the white ants upon and among which it lives, and whose soldiers would make short work of it but for that means of protection.

CLASSIFICATION.

After great consideration I have retained, almost in its entirety, Lacordaire's arrangement of the family. The affinities of several of the tribes lie in so many directions that it is not surprising that all the authors who have attempted a new arrangement of the tribes have arrived at a different conclusion. I may instance Jacquelin du Val's 'Genera des Coléoptères d'Europe,' Bedel's 'Faune des Coléoptères du Bassin de la Seine,' Horn's 'Genera of Carabidæ with special reference to the fauna of Boreal America'; Fowler's 'Coleoptera of the British Islands,' and lastly, Ganglbauer's 'Die Käfer von Mitteleuropa.'

I have not, however, blindly followed Lacordaire's arrangement, and in accord with Dr. Geo. Horn, I have in some cases removed certain genera to tribes with which they have evident affinities. After all it matters little if the family begins with inverted tribes in order of their sequence. But Lacordaire's arrangement has the great advantage of having been followed by the authors of the 'Munich Catalogue,' and also by the compilers of the 'Zoological Record' until 1889; so that until the time comes for the publication of a new Catalogue of *Carabidæ* I deem it desirable that Lacordaire's arrangement, with the few necessary corrections mentioned, should be maintained.

GENERAL.

In very few cases, and where the type specimens were either not obtainable or no longer to be found, I have copied or translated the original descriptions of genera and species, but all the other descriptions have been made from the specimen. The number of South African Carabidæ contained in this volume amount to 166 genera, including 899 species against 137 genera, and 558 species previously described. That I have been able to carry on the difficult and thankless task of identifying the species is due (1) to Professor Chr. Aurivilius of the Stockholm Museum, through whose courtesy I owe communication of Boheman's types, (2) to Mons. René Oberthur, of Rennes, who allowed me to compare myself my examples with Dejean's and De Chaudoir's types now in his possession, who generously presented me with some of these very types when I did not possess the species, and who also, later on, compared at my request such species the identity of which I was in doubt of. In that manner he has enabled me to avoid the errors into which I would of necessity have fallen. Without the help afforded me by these much-valued correspondents, the task I have attempted would have been impossible.

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I am also greatly indebted to many Colonial correspondents, scattered over the great South African area, who have for years collected and sent me their captures. To mention them all would necessitate a long list indeed, but I cannot sufficiently thank Messrs. A. W. Eriksson, G. A. K. Marshall, J. F. Darling, Rev. H. Junod, C. N. Barker, A. E. Haviland, F. C. Selous, Dr. F. Purcell, Rev. O'Neil, G. Warden, and G. Alston, for the invaluable assistance rendered me in procuring specimens from Ovampoland, Zambezia, Mozambique, Natal, Matabele and Manica lands, Cape Colony, and Bushman and Bechuana lands. It is to them that I am mostly indebted for the accumulation of material which has enabled me to add so much, not only to the knowledge of the South African carabidous fauna, but also to that of the other families of the Order.

The greatest number of genera and species described in this volume are kept in the cabinets of the South African Museum.

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ORDER COLEOPTERA.

FAMILY CARABIDÆ.

Mentum notched; ligula projecting and with paraglossæ; maxillæ slender; ciliate internally, not ending in an articulated claw, with an external biarticulated and palpiform lobe; mandibles seldom greatly developed, either toothless inwardly or with few teeth; predaceous in character; labial palpi consisting of three visible joints; antennæ, arising at the side of the head between the base of the mandibles and the eye, eleven jointed, slender; tarsi pentamerous; legs adapted generally to cursorial habits, abdominal segments, six in number, the three basal ones soldered together, but the first one "divided or hidden by the posterior coxæ in such a manner that it is entirely lateral, rarely appearing as a small triangular piece between the posterior coxæ"; * habits predaceous and carnivorous.

Lacordaire's following Enchson's division † has separated the family in two primary groups, based on the structure of the metathoracice pipimera, ‡ and that of the anterior legs, but the subsequent divisions, in three sub-families as given by Horn, seem to me more satisfactory.

Middle coxal cavities not entirely enclosed by the sterna, the epimeron of the mesosternum attaining the coxa Carabini.

Middle coxal cavities entirely enclosed by the sterna, the epimeron not attaining the coxa; head without antennal grooves beneath, and with distinct supra-orbital setæ. Ambulatorial setæ of abdomen usually well developed

Head with distinct, usually long, antennal grooves beneath and without distinct supra-orbital setæ.

Ambulatorial setæ of abdomen feeble or wanting Pscudomorphini.§

* Dr. G. H. Horn, 'On the Genera of *Carabidæ*, with special reference to the Fauna of Boreal America,' p. 91.

 \dagger In 1885 Schiodte was led to divide the *Carabidæ* in two sections; one in which the suture joining the epimera of the mesosternum to the episterna reaches the intermediate coxæ, and the other in which the suture stops along the outer side of the median part of the metasternum.

‡ I intend, when this Catalogue is sufficiently advanced, to give a Glossary and Introduction to the structure, external and internal, of the families treated.

§ This sub-family has no representatives in South Africa.

Harpalini.

SUB-FAMILY CARABINI.

TRIBE OMOPHRONIDES.

Mesosternum covered by the prosternum; this last part quadrate behind, truncated, and fitting closely against the metasternum; body suborbicular; anterior legs with one apical and another subapical spurs.

GEN. OMOPHRON, Latreille, Hist. Nat. Ins., 1804, p. 278.

Mentum with a sharp median tooth at the base; inner part of the lateral lobes nearly straight, the outer one rounded; ligula narrow, triangular, a little convex, and with two long setæ at the tip; paraglossæ broader than the ligula, very little shorter than the ligula and adhering to it, truncated with the outer angle, angular; last joint of maxillary and labial palpi long, fusiform; maxillæ slender, with a short apical hook and a few very rigid hook-like ciliæ, and a few more slender intervening ones inwardly; mandibles short, sharp, without any tooth in the inner part; labrum a little incised in front; head broad, separated from the epistome by an arcuated impression; eyes large, projecting; prothorax broader at the base than at the apex, with the outer sides regularly curved, fitting against the elytra; the latter ovate, a little convex, striated; legs moderately long, slender; the first joint of the anterior tarsi of the male much dilated and spongy underneath, that cf the intermediate ones also dilated, although in a lesser degree, but bristly underneath.

Found always in the neighbourhood of water, where they hide under the wet sand. The genus is represented in Europe, Africa, India, Madagascar, and North and South America.

Synopsis of Species.

| Elytra with a very broad sutural green band emitting two short | |
|---|-------------|
| fasciæ | suturalis. |
| Elytra with a very broad sutural band emitting three short | |
| fasciæ | picturatus. |
| Elytra with a narrow sutural green band emitting a short fascia | |
| behind and with three spots on each side | capicola. |
| Elytra with a narrow sutural green band, with eight maculæ and | |
| ree longitudinal green bands on each side | depressus. |
| | |

OMOPHRON SUTURALIS, Guér., Iconogr., p. 24, pl. 6, fig. 15*a*.*

Labrum, epistome, antennæ, and legs flavescent; head metallic green, with a triangular anterior flavescent margin, the punctures

* An extremely bad figure.

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not closely set; prothorax deeply punctured, metallic green in the centre, and with a broad anterior and lateral yellowish margin; elytra with fourteen striæ on each side, with the punctures less deep behind, yellowish, with the outer margin somewhat silvery, and having a broad sutural metallic green band extending on each side as far as the sixth stria, past the middle a short fascia reaching to the eleventh and sometimes the thirteenth stria, dilated above the apex as far as the seventh interval, and reduced from there to a narrow sutural line which does not reach the apical part; under side lightly infuscated. Length 6 mm.; width 4 mm.

Hab. Cape Colony (Cape Town, Stellenbosch, Worcester).

Оморнком рістикатиs, Bohem., Plate VII., fig. 2.

Vet. Acad. Förh., p. 6.

O. hottentotum, Pér., Trans. S. Afric. Phil. Soc., 1885, p. 75.

Labrum, antennæ, and legs flavescent; head metallic green, with a triangular flavescent patch, punctures deep and closely set; prothorax very deeply punctured, dark green, with a very narrow flavescent outer margin; elytra with fifteen striæ, the striæ with deep punctures and the intervals convex, ferruginous, with a broad sutural bronze band reaching from the base to the apex, much narrowed in the posterior part, and emitting three transverse bands on each side; the first one—a basal one—reaches the twelfth interval and is broadly incised in the median part; the middle one, much narrowed on the sixth, seventh, and eighth interval, reaches the thirteenth interval; and the third one—a slanting one—reaches the fourteenth; under side pale yellow, with the median part ferruginous. Length 7 mm.; width 4 mm.

Hab. Cape Colony (Fraserburg, Carnarvon), Bechuanaland (Ramoutsa). Originally described from Damaraland (Kuisip River).

OMOPHRON CAPICOLA, Chaud., Plate VII., fig. 1.

Rev. et Mag. Zool., 1868 p. 1.

O. australe, Pér., Trans. S. Afric. Phil. Soc., 1885, p. 74; ibid., 1888, pl. i., fig. 1.

Light yellow; head with a lateral triangular green patch on each side; prothorax with a broad basal green band in the centre; elytra with fifteen striæ, with the punctures moderately deep, very pale yellow, with a median green basal band, a narrow sutural one broadening in the middle in a quadrate patch reaching the fourth interval, and emitting below it a transverse fascia, somewhat sinuose, reaching the ninth interval, one basal spot on the ninth

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interval, and two small elongated patches in the median part, one the smaller of the two—on the sixth, the other on the tenth and eleventh; under side pale yellow, subinfuscated in the centre. Length 7 mm.; width 4 mm.

Hab. Cape Colony (Cape Town).

OMOPHRON DEPRESSUS, Klug,*

Monatsb. Berl. Ac., 1853, p. 237; Peters' Reise, 1862, p. 163, pl. 9, fig. 9.

Light brick-red; antennæ, palpi, and legs flavescent; prothorax with a narrow median longitudinal band and a broader transverse one above the base metallic green; elytra with thirteen striæ deeply punctate; the suture has a narrow green band narrowed behind, and on each side three short basal lines of the same colour, a long one on the tenth interval with two quadrate spots on each side, and on the sixth interval another line beginning at about the median part, connected there transversely with the sutural part, and near the apex a small quadrate spot between the suture and the first line. Length 9 mm.

Hab. Mozambique (Tette).

TRIBE CARABIDES.

Mesosternum cuneiform in the anterior part; prosternum produced behind; spurs of tibiæ terminal.

GEN. CALOSOMA, Weber,

Observ. Ent., p. 20.

Mentum broad, with a short median sharp tooth in the middle; inner part of the lobes of the mentum slightly slanting, the outer part rounded; ligula very short, broadly triangular at the apex, having a fringe of setæ; paraglossæ fused with the ligula, the latter narrow at the tip and projecting slightly; last joint of palpi short, somewhat securiform; mandibles long, sharp, striated on the upper part, without any inner tooth; labrum short, incised in the centre; antennæ subfiliform, the third joint longer than the others and compressed into a sharp ridge on the upper part; prothorax subhexagonal; elytra subelongato-quadrate, moderately convex; legs long, intermediate tibiæ curving inside; the three basal joints of the anterior tarsi dilated.

Hab. The genus has representatives in Europe, Asia Minor, China, India, the Canary, St. Helena, and Vancouver Islands, North and South America, Tasmania, and Australia.

* This description is made from the figure in Peters' Reise n. Moz.

of the Coleoptera of South Africa.

Synopsis of Species.

| Elytra with the intervals equal, and three series of brassy shining | |
|---|--------------|
| spots on each side | rugosum. |
| The brassy spots on the dorsal series close to one another | hottentotum. |
| Elytra with the alternate intervals raised and three series of | |
| brassy spots on each side | senegalense. |
| Elytra with the alternate intervals much raised and without any | |
| brassy punctures | planicolle. |

CALOSOMA RUGOSUM, De Geer, Mem. Hist. Ins., vii., p. 627, pl. 47, fig. 2.

C. chlorosticum, Klug, Symb. Phys., iii., pl. 23, fig. 10.

Greenish bronze, more or less shining on the upper part, shining; palpi piceous; antennæ with the four basal joints piceous, the others rufescent; head closely but not deeply punctured; prothorax one-third broader than long, with the outer sides rounded and carinate, and the median part inflated, finely shagreened, depressed on each side near the base, and with a short median longitudinal very narrow groove; scutellum smooth, triangular; elytra twice as broad at the base as the hind part of the prothorax, gradually ampliate from the shoulder to three-fourths of the length, but with the outer sides linear, diagonally rounded behind, not very convex; narrowly punctato-striate, with the intervals convex and regularly and deeply creased transversely, and with three regular series of equidistant shining brassy round dots on each side; legs and under side piceous. Length 18–26 mm.; width 9–11 $\frac{1}{2}$ mm.

Varies much in size, is generally smaller in such localities where droughts are of common occurrence, such as the north-western part of the Cape Colony. I own a male example from the neighbourhood of Kimberley only 15 mm. long and 7 mm. in width.

Hab. Cape Colony (all districts), Natal (D'Urban), Bechuanaland, Transvaal (Potchefstroom), Damaraland.

CALOSOMA HOTTENTOTUM, Chaud., Bull. Mosc., 1852, i., p. 99.

Size, shape, and colouring of C. rugosum.

The description given by De Chaudoir is most obscure, but having been enabled to examine the type, I find that, according to my notes, the only difference between *rugosum* and *hottentotum* is that the brassy spots on the elytra are much more closely set in the second than in the first-named species. Chaudoir says that that species was labelled in Dupont's collection as coming from the Cape of Good Hope. I have good reason to believe that Dupont's collection included Delegorgue's captures, was made not in the present colony of the Cape of Good Hope, but in what is now the Transvaal, Matabeleland, and Natal. It is certainly strange that among the numerous examples of Calosoma received from these localities I should not have been able to identify C. hottentotum; and thus, without absolutely saying that this species is only a sport (C. rugosum varies considerably in shape, size, and coloration), I am inclined to believe that either it is not a South African species or that it is a very rare and much localised species.

CALOSOMA SENEGALENSE, Dej.,

Spec. Col., v., p. 562.

C. mossambicense, Klug, Monatsb. Berl. Ac., 1853, p. 247, Peters' Reise, 1862, p. 162.

More or less shining bronze colour on the upper part; the four basal joints of the antennæ black, shining, the others pubescent and slightly rufescent; head shagreened; prothorax ampliated in the middle, with the outer sides carinated; plane impressed laterally near the base, with a fine median longitudinal groove and finely shagreened; elytra twice broader at the base than the posterior part of the prothorax, a little ampliate behind with the outer sides linear, obliquely rounded in the posterior part, plane in the anterior part but convex in the posterior, narrowly but deeply punctato-striate, with the alternating intervals much raised, but all of them regularly and deeply creased transversely, and having on each side three series of regular shining brassy round spots, and an irregular one on the outer margin; under side and legs piceous. Length 23–27 mm.; width 10–13 mm.

Hab. Damaraland, Mozambique (Tette, teste Klug).

CALOSOMA PLANICOLLE, Chaud.,

Plate III., fig. 1.

Ann. Soc. Ent. France, 1869, p. 369.

Black, shining on the upper side and also underneath; palpi piceous; four basal joints of antennæ also piceous, the others black, pubescent; head finely shagreened, the lateral impressions in the anterior part very deep; prothorax hexagonal through the median part of the outer sides, being much ampliated and aculeate, roughly shagreened; the longitudinal median groove very narrow; scutellum very short, triangular; elytra twice broader at the base than the posterior part of the prothorax, ampliate behind, where they are three times as broad, plane in the anterior part, convex in the posterior, narrowly punctato-striate, with the intervals deeply and regularly creased transversely, and the alternate ones much more raised than the others; no series of shining brassy spots.

Much larger than C. senegalense, this species is distinguished by

the more hexagonal form of the prothorax, and also by the absence on the elytra of the series of glittering brassy spots. Length 33-36 mm.; width 13-16 mm.

Hab. Delagoa Bay (Lourenço - Marquez), Zambezia (Victoria Falls). Gestro records this species from the Galla country, in North-Eastern Africa.

TRIBE HILETIDES.

GEN. HILETUS.

Mentum broadly incised, concave in the centre; the two lateral lobes convex; the median tooth short quadrifid; ligula very long; subspatuliform, ciliate, but truncate at the tip; paraglossæ filiform, detached from the ligula and nearly as long; ciliate inwardly at the tip; maxillæ in the shape of a broadly concave horny process under the short claw, consisting according to Lacordaire of fused and arched ciliæ; last joint of palpi fusiform and acute*; jaws very broad, convex, and deeply servate; labrum broader than long, with only one seliger puncture in the angular part of the apex; head broad, thick; eyes projecting; antennæ inserted under a small process on a line with the base of the mandibles, fractate, the first joint very long and with a groove below the eyes to receive it; prothorax broad, subquadrate, but a little attenuated behind; elytra subparallel, a little rounded behind, moderately convex; legs moderately long; the three basal joints of the anterior and median tarsi of the male slightly enlarged in the shape of an elongated square, and spongy underneath, those of the female subfiliform, the two spurs on the tibiæ terminal; prosternum produced behind in a long obtusely triangular process fitting in a depression of the mesosternum.

The insects included in this genus have the general facies of a Pterostichid, but the shape of the antennæ is that of a Scaritid; the shape of the ligula and paraglossæ as well as that of the mandibles is most anomalous; it is for that reason that Lacordaire in his 'Genera' has created a special tribe, including only the genus *Hiletus*, which now contains five species from Senegal, Guinea, Abyssinia, Zanzibar, besides the South African one, and also one from South America (Brazil).

HILETUS OXYGONUS, Chaud., Bull. Mosc., 1861, ii., p. 507.

Black, shining; head smooth, with two longitudinal parallel grooves on each side; apical part of the joints of the palpi rufes-

^{*} Lacordaire says that in the male the ultimate joint is very securiform; this is not the case in the five examples in my possession, but they might prove to be all females.

cent; prothorax one-fourth broader than long, a little narrowed from the median part towards the base, which is truncate with outer sides carinate, depressed on the upper part with a faintly arcuate anterior transverse impression, a very fine medium groove and two depressions on each side of the base, smooth, shining, with the exception of the depressions, which are very slightly punctulate; no scutellum; elytra bismuate at the base, with the humeral angles a little rounded, the outer sides straight, the posterior part gradually rounded, moderately convex, narrowly striate with the intervals convex very smooth, two punctures on the third stria, the one before the other behind the median part, the outer margin with a series of regular, closely set, deep punctures; under side and legs black, shining; the two apical joints of the tarsi and claws rufescent. Length 10 mm.; width 3 mm.

Hab. Mozambique (Rikatla).

TRIBE PROMECOGNATHIDES.

Mandibles very long, falciform; maxillæ very slender and very long; the four basal joints of antennæ glabrous, the first one very long; eyes with two supra-orbital setæ; prothorax and elytra elongato-ovate; anterior and intermediate tarsi dilated at the tip; tarsi not dilated.

The creation of this tribe is due to Horn, who has justly included in it the American genus *Promecognathus* and *Axinidium*.

> GEN. AXINIDIUM, Sturm., Catal., 1843, p. 327, pl. 1, fig. 4.

Mentum short, emarginate, with a median tooth; ligula very short, broad, horny, transverse; paraglossæ indistinct *; mandibles longer than the head; falcate; maxillæ very long, extremely slender, subfalcate at the tip, the outer lobes also very long, slender, and biarticulate; labial palpi almost filiform, the last joint truncate at the tip, the second joint of the maxillary ones, swollen, the third very small, the last one broadly securiform; labrum deeply emarginate, and with a very long seta on each side; basal joint of antennæ very long, stout, glabrous, as are also the three following, the basal and the second one with a long lateral seta, apical in the basal one, median and much longer in the second one; eyes prominent, with two supra-orbital setæ; head elongato-quadrate; prothorax truncate at the base and apex, elongato-ovate, and with two lateral setæ near the anterior angle, and one in the median part; elytra ovate; body

* I have not been able to dissect the buccal organs of the only specimen that I have seen.

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pedunculate; anterior tibiæ much dilated at the apex, and without any external spur; tarsi not dilated, short, decreasing in size.

AXINIDIUM AFRICANUM, Sturm., Catal., 1843, p. 327, pl. 1, fig. 4.

Piceous red, a little darker on the head and prothorax than on the elytra; palpi, antennæ, and legs rufescent; head smooth; clypeus and labrum short; the basal suture of the clypeus indistinct; antennæ briefly pubescent, with the exception of the four basal joints, which are glabrous; the last joint is long and ovate, the basal one much elongate and club-like; prothorax convex, smooth, truncate at apex and base, carinate laterally and basally, ovate laterally, much constricted behind, with a short sharp posterior angle, the median longitudinal groove reaching from the base towards the apex, but stopping short at about two-thirds of the length; body pedunculate; elytra elongato-ovate, with the outer angles slightly rounded, the outer margin carinate, convex, a little depressed in the anterior part, smooth laterally, and with four faint striæ on each side of the suture showing a faint trace of punctuation, and with three broad setigerous punctures—basal, median, and apical—on the third stria. Length 7 mm.; width 2 mm.

Hab. Cape Colony (Oudtshoorn).

SUB-FAMILY HARPALINI.

TRIBE LACHNOPHORIDES.

Body subpedunculate; antennæ slender, with three or four glabrous joints; mentum with a median tooth a little shorter than the lateral lobes; last joint of palpi ovoid, suddenly acuminate at tip, and pubescent or subfusiform, broadly truncate at the apex and glabrous; head narrowed behind; two supra-orbital setæ; prothorax ovate; elytra elongate, moderately plane, sinuate apically; legs slender; anterior tarsi of the male not dilated; claws not pectinate.

Synopsis of Genera.

Last joint of palpi ovoid, suddenly acuminate at tip; the surface pubescent; ligula shorter than the paraglossæ Lachnophorus.* Last joint of palpi fusiform, truncate at tip, and glabrous;

paraglossæ hardly longer than the ligula Lasiocera.

GEN. LASIOCERA, Dej.,

Spec. Col., v., p. 283.

Mentum short, slightly notched, trilobate, the median lobe nearly as long as the lateral ones; ligula gradually ampliated from

* This genus does not occur in Africa.

the base to the apex and truncated at the tip, the paraglossæ adhering to it and hardly projecting beyond; last joint of labial palpi fusiform and very sharp at the tip, that of the maxillary truncate; mandibles nearly covered by the labrum, which is narrowed in front and slightly incised at the tip; head triangular, suddenly narrowed behind in a short neck; eyes large and very prominent; antennæ filiform, slender, the joints, with the exception of the three basal ones, with four or five long bristles; prothorax very convex, inflated in the median part; elytra more than twice as broad at the base than the basal part of the prothorax, parallel with the shoulders, rounded, truncated posteriorly, with the outer angle sharp, depressed, or slightly convex, more or less deeply punctatostriate, third interval with three distinct punctures; legs slender; tarsi narrow, subfiliform, the fourth one small and slightly incised; claws not pectinate.

Hab. Two representatives of this genus are recorded from Senegal and Zanzibar, and one from India.

Synopsis of Species.

| Elytra punctato-striate, with the intervals plain; ten small yellow | |
|---|-------------|
| dots on each elytron | tessellata. |
| Elytra broadly and deeply punctato-striate; intervals narrow, | |
| convex. | |
| Longitudinal yellow band, notched in the middle on each side, | |
| and an uneven transverse post-median moderately broad macula | gracilis. |
| Three yellowish indistinct patches on each elytron | jucunda. |

LASIOCERA TESSELLATA, Klug,

Monatsb. Berl. Ac., 1853, p. 249; Peters' Reise, 1862, p. 174, pl. 9, fig. 3.

Dark greenish bronze on the head and prothorax; head finely and closely punctured; antennæ flavescent; palpi also flavescent, with the apical part of the ultimate joints slightly infuscated; prothorax oblongo-ovate, very closely and deeply punctured; elytra elongated, very slightly ampliated towards the apical part, truncated obliquely behind, with the posterior angles acute and the humeral angles a little rounded, depressed, finely punctato-striate with the intervals plane, the third one with three punctures, bronze, and having on each side an elongated sub-basal patch on the fifth interval, a small dot below it on the fourth, three adjoining one another at about the median part on the fifth, sixth, and seventh respectively, two in the posterior part on the third and fourth, and two more a little lower down on the fifth and sixth, also a supra-apical one close to the

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suture; under side piceous; legs yellowish red.* Length 6 mm.; width 2 mm.

Hab. Mozambique (Tette, teste Klug), Damaraland.

LASIOCERA GRACILIS, Bohem., Insect. Caffr., i., p. 26.

Head and prothorax greenish bronze, the former brassy in the centre; antennæ and palpi very pale yellow, almost transparent; prothorax oblongo-ovate, with a hardly noticeable median longitudinal ridge, and closely and deeply punctured; elytra rounded at the shoulders, with the outer sides straight, truncated obliquely behind, with the outer angle acute, depressed, deeply and closely punctato-striate with the intervals narrow, sub-convex, transversely rugose, bronze, moderately shining, and having on each side, before the median part and nearer to the outer margin, an elongated longitudinal pale-yellow patch slightly notched in the middle on both sides, and another post-median, moderately large, transverse, and uneven one of the same colour; legs almost transparent, with the knees and the apical part of the joints of the tarsi slightly infuscated. Length 5 mm.; width 2 mm.

Hab. Interior of Caffraria (Boheman).

LASIOCERA EGREGIA, Plate X., fig. 9.

Head and prothorax greenish bronze, with a brassy tinge in the middle, both roughly shagreened; antennæ and palpi almost transparent; prothorax almost fusiform; elytra with the shoulders rounded and the outer sides parallel, truncated obliquely behind, with the posterior angle produced in a very short spine, a little convex, very broadly and deeply punctato-striate, with the intervals very narrow and convex, bronze, with a slight greenish tinge, and four round, rather indistinct, more or less rounded, yellowish patches, a sub-basal median and post-median one in a longitudinal line, and a nearly juxta-sutural round dot close to the post-median patch but a little lower down; legs very pale yellow, almost transparent, with the knees and the tarsi slightly infuscated. Length 6 mm.; width $1\frac{1}{2}$ mm.

Hab. Zambezia (Salisbury).

TRIBE EGIDES.

Body pedunculate; head constricted behind in a very slender and long neck; two long supra-orbital setæ; antennæ long, subfiliform,

* These patches do occasionally coalesce so as to form three lateral patches, as figured in Peters, pl. 9, fig. 3.

or with the four apical joints thickened, the three basal joints pubescent; last joint of labial palpi very swollen at the base and acutely subulate at the tip, or fusiform and pubescent; prothorax and elytra subgibbose, the latter not sinuate at the apex; legs long, slender; anterior tarsi not dilated; claws not pectinate.

Hab. The tribe has representatives in North and South America, New Caledonia, and India.

Synopsis of Genera.

joints of the antennæ very much thickened Amæbæa.

GEN. EGA, Castelnau,

Etudes Entom., 1835, p. 93.

Mentum emarginate, with a short median tooth; ligula long, truncate at the tip, which is slightly ampliate, paraglossæ connected with it, but a little longer; last joint of palpi ovate, pubescent, and produced at the tip in a long subulate process; mandibles slender, incurved at tip; labrum transverse, plurisetose in the anterior part; head gradually narrowed behind in a long neck; eyes prominent; antennæ very long; joints thick; prothorax subgibbose, very much attenuated in front and behind, and with a long lateral median seta; body with a long peduncle; elytra very convex, rounded at the apex; legs slender, long; tarsi pubescent on the upper part; first joint very long, as long as the two following; claws not pectinate.

EGA NATALENSIS,

Plate X., fig. 10.

Black, shining; the three basal joints of antennæ flavescent, with the exception of the basal part of the first, which, like the palpi, is infuscate; the other joints are black, but the eighth and ninth, and occasionally the basal part of the tenth, are white; legs infuscate, with the basal part of femora and median part of tibiæ whitish; head and neck smooth, the former pilose underneath; prothorax gibbose in the centre, much attenuated in front and behind, smooth; elytra very convex, depressed in the anterior part; the suture subcarinate, not striate, very finely pubescent, and with three rows of long bristles placed at some distance from one another; posterior margin not sinuate, and with a subangular very long seta; under side piceous black. Length $3\frac{1}{4}$ -5 mm.; width $1-1\frac{1}{2}$ mm.

Hab. Natal (D'Urban?); Zambezia (Salisbury).

GEN. AMŒBÆA.

Mentum and ligula as in Ega; penultimate joints of palpi bristling with long hairs, ultimate ones very sharp, the labial one somewhat fusiform; mandibles long, sharp; labrum short, transverse; head and neck of Ega, the latter part not so long; antennæ with the five basal joints slender, and the four apical ones gradually thickened and nearly twice as thick as the basal ones; the four basal joints are glabrous and the others densely pubescent, but the seven basal joints bear inwardly only four or five long setæ at the tip, as in *Lasiocera*; prothorax as in *Casnonia*; body pedunculate; elytra convex, sinuate laterally below the humeral part, truncate and slightly sinuate behind; legs very long and slender; claws not pectinate.

The facies is that of Ega, but it is easily distinguished by the fusiform shape of the labial palpi, by the basal joints of antennæ ciliated inwardly, and by the thickening of the four apical joints.

AMŒBÆA MASHUNA.

Black, subopaque; palpi black; the four basal joints of antennæ slightly infuscate, the other three albescent, and the four apical ones black; basal part of the femora and the tibiæ whitish; head closely plicate, pilose underneath, narrowed behind into a long neck, and having on each side a long seta in a line with the supra-orbital ones; prothorax narrow, elongated, attenuated in front and less so behind, convex and a little swollen in the median part, plicate transversely, the folds rugose and closely set, faintly grooved in the centre and with a lateral series of long, stiff black bristles; elytra with the humeral part sloping diagonally, convex, sinuate below the humeral angle, slightly ampliate at the median part, and not much attenuate from there to the apex, which is truncate and a little sinuate; they are deeply striate, with the intervals very finely shagreened and with a series of long, stiff, black bristles in the alternate striæ; are dull black with a transverse, sub-basal, narrow, yellowish band extending from the second stria to the outer margin, a line of the same colour extending longitudinally on the second interval from the median part to the top of the posterior declivity, a shorter one on the fourth interval, and two supra-apical spots on the fifth and sixth intervals respectively: these two last spots are missing sometimes, but when they exist they coalesce with the apical part of the yellowish line on the fourth interval. Length $5\frac{1}{2}$ -6 mm.; width 2 mm.

Hab. Zambezia (Gadzima).

TRIBE HEXAGONIDES.

Body subpedunculate; antennæ slender; three basal joints glabrous; head narrowed behind into a neck; mentum with a

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median tooth, tip of maxillæ not articulate; eyes large, two supraorbital setæ; prothorax elongate; elytra oblongo-ovate, plane not truncate behind; legs slender; tarsi alike in both sexes; claws not pectinate.

GEN. HEXAGONIA, Kirby.

TRIGONODACTYLA, Dej.

Mentum trilobate, the median lobe shorter than the lateral ones; ligula horny, projecting; the paraglossæ linear, not much longer than the ligula and fused with it; palpi slender, last joints subcylindrical, acuminated at the tip; mandibles long, arcuated, and sharp; head triangular, with a short narrow neck; antennæ reaching the base of the elytra, first joint cylindrical, second very short; prothorax cordiform; elytra parallel, rounded behind and very flat; legs short; tarsi broad, triangular, the fourth one much broader, bilobate; claws not pectinate.

Hab. Representatives of this genus occur in India, Burmah, the Malayan Archipelago, and Africa (Zanzibar, Guinea, Senegal).

Synopsis of Species.

| Elytra light testaceous | immaculata. |
|---|-------------|
| Elytra with a triangular posterior black patch; head black, | |
| postical patch short | terminata. |
| Head red, postical patch longer | præusta. |
| Elytra with an ovate black patch on each side | natalensis. |

HEXAGONIA IMMACULATA, Chaud., Bull. Mosc., 1861, ii., p. 533.

Pale ferruginous; head and prothorax dark brown; antennæ and legs light testaceous; head with moderately deep but not closely set punctures in the anterior part, and with a deep longitudinal depression on each side; prothorax cordate, with the outer margins slightly recurved and with an inner row of punctures, the longitudinal discoidal groove also broadly punctured; elytra broader than the prothorax, very depressed, parallel, punctato-striate, with the intervals plane, and having some irregular broad punctures on the third, fifth, and seventh. Length $11\frac{1}{2}$ mm.; width $3\frac{1}{4}$ mm.

Hab. Natal (D'Urban).

HEXAGONIA PRÆUSTA, Chaud., Bull. Mosc., 1861, ii., p. 533.

Light rusty red, with the head darker; head slightly punctulated, the longitudinal impressions on each side distinct, but not very deep; prothorax cordiform, with the outer margins slightly recurved, and

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with an inner row of punctures, the longitudinal discoidal groove also broadly punctured; elytra broader than the prothorax, parallel, but slightly more ampliated behind than in *H. immaculata*, punctatostriate, with the intervals plane, and four punctures on the third interval and three on the fifth, the two posterior ones close together, light testaceous, with a posterior triangular black patch, the apex of which reaches along the suture to nearly half of the length. Length $7\frac{1}{2}$ mm.; width 3 mm.

Hab. Port Natal, teste Chaud.; Caffraria (no exact locality).

HEXAGONIA TERMINALIS, Gemm.,

H. terminata, Dej., Spec. Col., v., p. 289; Lacord., Gen. Atlas, pl. 3, fig. 1.

Head very dark brown, deeply punctured laterally and behind, with a smooth central spot; antennæ dark testaceous; prothorax brick-red, cordiform, deeply grooved in the centre, with a few scattered, sometimes confluent punctures; elytra hardly broader than the prothorax at its widest, parallel, punctato-striate, the intervals convex, three punctures on the third and one on the apical part of the fifth, brick-red, shining, with a posterior triangular black patch, the apex of which reaches to about one-fourth of the length; under side and legs testaceous. Length $10\frac{1}{2}$ mm.; width $3\frac{1}{4}$ mm. *Hab.* Mozambique (Rikatla); occurs also in Senegal.

> HEXAGONIA NATALENSIS, Chaud., Bull. Mosc., 1861, ii., p. 534.

Rusty red, with the head darker; smaller and more parallel than *præusta*; head a little more quadrate, anterior part of head more punctured; prothorax similar, and with small distant punctures; elytra narrower and quite parallel, striated, the third interval with three indistinct punctures, and below the median part an ovate sutural black patch extending as far as the third stria on each side; legs of the same colour as the elytra. Length $7\frac{1}{3}$ mm.

Hab. Port Natal, teste Chaud.

TRIBE ODONTOCANTHIDES.

Ligula adhering partly to the paraglossæ, the latter free in the apical part, as long, or longer than the ligula; head narrowed behind into a distinct neck; first joint of antennæ not longer than the second and third together; prothorax elongated, subfusiform; elytra subtruncated or incised at the apex; tarsi slender, similar in both sexes; claws not pectinate.

Two genera alone in that tribe are represented in South Africa.

Descriptive Catalogue

Synopsis of Genera.

Mentum with the median tooth shorter than the lateral lobes; head with a long neck, narrowed triangularly from behind the eyes towards the base

Mentum with the median tooth as long as the lateral lobes; head narrowed behind, but with a shorter neck-like process.

GEN. CASNONIA, Latreille, Icon. Col. Europ., i., 1822, p. 77.

Mentum deeply incised, and having a median tooth shorter than the lateral lobes; ligula ovate, slightly truncate at the tip; paraglossæ very slender, hardly as long as the ligula, and disconnected with it for the greatest part of the length; last joint of palpi fusiform, acuminate; mandibles long, projecting, and with a blunt tooth at the base; labrum transverse; head rhomboid, with a short spherical neck; antennæ reaching the base of the elytra, basal joint moderately long, thickened, second joint very short, the others sub-equal; prothorax much attenuated, subcylindrical in the middle, constricted above the base; elytra broader than the prothorax, sub-parallel, slightly convex, rounded in the posterior angle, and slightly oblique towards the suture; legs slender; tarsi long, filiform, with the fourth joint slightly incised; claws not pectinate.

Hab. Casnonia is generally met with in damp grassy spots, and is represented in Africa, (Senegal, Abyssinia, Zanzibar mainland), India, Burmah, Hong Kong, Australia, and North and South America. The South African species are very closely allied to one another.

Synopsis of Species.

Elytra dark metallic green, with a reddish-brown apical patch on algoensis. Elytra reddish brown, with a broad discoidal dark-green patch narrowed behind dorsalis. Elytra reddish brown, with a sutural dark-green band suturalis. Elytra reddish brown, with a sutural and a lateral dark-green band { prothorax, with very closely-set punctures prothorax, with punctures not closely set amænula. capicola. Elytra totally light reddish brown •• rufopicea. distincta. Elytra black, with a small, yellow, supra-apical spot on each side.. Head punctulate in the anterior part. Elytra dark metallic green, with a posterior reddish-brown patch on each side of the suture natalensis.

CASNONIA ALGOENSIS.

Head black, with a metallic green tinge, deeply depressed longitudinally on each side of the epistome, and with a median crescent-

Head smooth.

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Casnonia.

Stenidia.

of the Coleoptera of South Africa.

shape impression, smooth, very shining; palpi, apical part of mandibles and the four basal joints of the antennæ pale yellow; prothorax dark metallic green, deeply and closely punctured from base to apex, not much narrowed in the anterior part; elytra deeply striated, with the striæ broadly punctured from the base to two-thirds of the length, the punctures very faint from there to the apex, and the third interval with three punctures, dark metallic green, with the outer margins and the apical part pale yellowish red; legs yellowish, under side very dark green. Length $7\frac{1}{2}$ -8 mm.; width 2-2 $\frac{1}{4}$ mm.

Hab. Mozambique (Rikatla).

CASNONIA DORSALIS.

Head black, with a metallic green tinge, deeply depressed longitudinally on each side of the epistome, and with a median crescentshaped impression, smooth, very shining; palpi, apical part of mandibles and the four basal joints of the antennæ pale yellow; prothorax very slightly punctured in the anterior part, and more closely and deeply from about the middle towards the base; elytra deeply striated, with the striæ broadly punctured from the base to two-thirds of the length, but distinct, although smaller, from there to the apex, pale yellow, with a broad dorsal green metallic band extending on each side of the suture to the fifth interval as far as two-thirds of the length, and narrowed from there into a sutural band reaching the third interval, but stopping short of the apex; legs pale yellow; pectus dark brown; abdominal segments yellowish red. Length 7 mm.; width 2 mm.

Hab. Mozambique (Rikatla).

CASNONIA SUTURALIS.

Head, palpi, apical part of mandibles, and four basal joints of antennæ as in the two preceding species; prothorax very slightly punctured in the anterior part, and more closely from about the middle to the base, dark metallic green; elytra deeply striated, with the striæ broadly punctured from the base to two-thirds of the length, brownish, with a green sutural band extending from base to apex, a little broader near the base, and extending from the suture to the second interval; pectus dark brown, abdominal segments of a lighter colour; legs pale yellow. Length 6 mm.; width 2 mm.

Hab. Mozambique (Rikatla).

CASNONIA AMŒNULA.

Head smooth, black, the first three joints of the antennæ and part of the fourth pale yellow, the other joints as well as the last one of the palpi infuscated; prothorax closely and deeply punctured from apex to base; elytra deeply striated, with the striæ punctured from apex to base, yellowish brown, with the basal part dark green to about one-eighth of the length, a sutural patch of the same colour extending as far as the second interval and reaching the apex, also a lateral greenish infuscation on each side, darker in the anterior part, and somewhat evanescent beyond the median part; pectus dark green; abdominal segments fuscous red; legs pale yellow. Length 6 mm.; width $1\frac{3}{4}-2$ mm.

Hab. Natal (Frere).

CASNONIA DISTINCTA.

Head black, shining, with a few faint punctures, pilose behind the eyes; antennæ black, with the three first joints and also the basal part of the fourth pale yellow, apical joint of the palpi black; prothorax black, with a greenish tinge, very deeply and closely punctured, and with a long erect pubescence; elytra subparallel, twice as broad as the prothorax at its broadest part, moderately convex, pubescent, striate, with the striæ deeply punctured from base to apex, greenish black, shining, and with a small ovate yellow spot on each side, extending on the fourth and fifth intervals above the apical part; legs pilose, the base of the femora and tibiæ flavescent; tarsi, knees, and apical part of the femora infuscate. Length $6\frac{1}{2}$ mm.; width 2 mm.

Hab. Zambezia (Salisbury), Bechuanaland (Ramoutsa).

CASNONIA NATALENSIS, Chaud., Bull. Mosc., 1862, iv., p. 290.

Head black, shining, punctulated from the epistome to behind the eyes; palpi and four basal joints of antennæ pale yellow, the other joints very slightly infuscated; prothorax very dark green, deeply and closely punctured from base to apex; elytra deeply striate, with the striæ broadly punctured from the base to about two-thirds of the length, dark metallic green, with a yellowish subovate macula on each side of the apical suture, which sometimes invades the whole of the posterior margin; legs pale yellow, with the apical part of the femora infuscated. Length 7 mm.; width 2 mm.

Hab. Natal (no exact locality recorded).

CASNONIA CAPICOLA.

Very closely allied to *C. amænula*; the colouring of the head, prothorax, and elytra is alike; the three basal joints of the antennæ are infuscated at the tip, the second one often entirely black instead of being pale yellow, and the other joints quite black; the knees are infuscated, but the most distinctive character is found in the prothorax, which is a little more robust and covered with moderately closely set punctures, not abundant on the anterior part, while in C. amænula these punctures are very closely set as well in the anterior as on the discoidal or posterior part. Length 6 mm. width 2 mm.

Hab. Cape Colony (Stellenbosch).

CASNONIA RUFOPICEA, Chaud., Bull. Mosc., 1862, iv., p. 289.

Head black, smooth, with a subovate impression in the centre; palpi, apical part of mandibles, antennæ, and legs pale yellow; prothorax light reddish brown; elytra light reddish brown, deeply striate, with the striæ broadly punctured from the base to two-thirds of the length. Length $6\frac{1}{2}$ mm.

Hab. Natal (D'Urban), teste Chaud.

GEN. STENIDIA, Brullé,

Hist. Nat. Ins., iv., 1835, p. 151.

Mentum broadly incised, with the median tooth nearly as long as the lateral lobes; ligula slender, deeply notched at the tip, and with a long seta on each side of the tip; paraglossæ nearly pellucid, and a little longer than the ligula; last joint of labial and maxillary palpi fusiform, and truncated at the tip; mandibles slender, projecting; labrum quadrate; head ovate, with a distinct neck; antennæ reaching the base of the elytra, the first joint thickened, long, the second short, the third one as long as the first but slender, the fourth tapering at the base, and the others about equal; prothorax subcylindrical; elytra broader than the prothorax, elongated, parallel with the anterior angles rounded, truncated obliquely behind, and slightly convex on the upper part, punctato-striate, with three punctures on the third interval; legs slender; joints of tarsi long, identical in both sexes, hairy underneath, with the fourth one slightly incised; claws not pectinate.

Like *Casnonia*, *Stenidia* are found in South Africa in damp, marshy places under tufts of grass. They seem to be restricted to Africa. The species known outside the South African limit are found in Senegambia, the Congo, Angola, Zanzibar, Mombassa.

Synopsis of Species.

Head black; prothorax red. Elytra totally green; the four basal joints of antennæ reddish Elytra totally green, very narrow; the two basal joints of antennæ reddish angusta.

1896.]

| Elytra green, reddish at the tip | •• | •• | ••• | abdominalis. |
|--|----|----|-----|---------------|
| Elytra green in the anterior part, purplish behind | •• | •• | •• | jucunda. |
| Head, prothorax, and elytra reddish brown. | | | | |
| Posterior part of the head much narrowed | •• | •• | • • | fraterna. |
| Posterior part of the head straight | | | •• | quadricollis. |

STENIDIA ELEGANTULA.

Head black, deeply and closely punctured in the anterior part, smooth in the posterior, with the neck and apex of mandibles red, the two last joints of the palpi and the three basal, and also part of the fourth of the antennæ reddish, the others black; prothorax red, deeply and closely punctured and without any trace of median longitudinal groove; elytra elongated, parallel, slightly convex, bright metallic green, deeply punctato-striate, with the intervals narrow and slightly convex in the central part of the disk; legs red, infuscate at the apex of the femora; abdomen greenish black. Length $7\frac{1}{2}-8$ mm.; width $2-2\frac{1}{4}$ mm.

Hab. Mozambique (Rikatla).

Allied to S. corrusca, Laf., but less shiny, and with the prothorax less deeply punctured.

STENIDIA ANGUSTA.

The description of S. corrusca applies also to the present species; the head, however, has a more cyaneous tinge, and is very much more deeply and closely punctured; the two basal joints only of the antennæ are red; the palpi are black; the prothorax is more cylindrical; and the elytra much narrower; legs and abdomen as in S. corrusca. Length $6\frac{1}{2}$ -7 mm.; width $1\frac{1}{4}$ mm.

Hab. Zambezia (Salisbury).

STENIDIA ABDOMINALIS, Chaud., Bull. Mosc., 1862, iv., p. 299.

Closely allied to S. corrusca; it is, however, of a larger size, 9 mm. instead of $7\frac{1}{2}$ mm.; the facies is more robust; the prothorax is less narrowed in the anterior part; the elytra are longer, more parallel, and narrowly metallic red at the apex; the abdomen is rusty-red instead of greenish black. Length 9 mm.

Hab. Natal (D'Urban), teste Chaud.

Stenidia jucunda, Pér.,

Plate VII., fig. 3.

Head black, deeply and closely punctured from the apex to the neck, which is red; apex of mandibles also red; palpi, the three basal joints of the antennæ, and part of the fourth pale red, the other joints infuscated with the base reddish; prothorax hardly

of the Coleoptera of South Africa.

narrowed in the anterior part, red, shining, punctured, and with a faint, narrow, longitudinal groove in the centre; elytra elongated, parallel, depressed, deeply punctato-striate, with the intervals plane, dark metallic green from the base to one-fourth of the length, lighter green from there to the median part, and reddish with a violaceous tinge from the middle to the apex; abdomen greenish black; legs and tarsi red, with the apical part of the femora black. Length 9 mm.; width $2\frac{1}{4}$ mm.

Hab. Mozambique (Rikatla).

STENIDIA FRATERNA.

Light ferruginous-red, with a metallic sheen; head nearly smooth, bi-impressed in the anterior part; palpi, the three basal joints of the antennæ and one-half of the fourth light red, the other joints slightly infuscated; prothorax attenuated at the apex, not constricted at the base, closely and deeply punctured, and with a narrow, median, longitudinal groove; elytra elongated, parallel, deeply punctato-striate, with the intervals slightly convex. Length 10 mm.; width $2\frac{3}{4}$ -3 mm.

This species is very closely allied to *S. unicolor*, Brull., and may prove to be only a slight variety of that species. *S. unicolor* is recorded from Senegal.

Hab. Mozambique (Rikatla).

STENIDIA QUADRICOLLIS, Chaud., Bull. Mosc., 1872, p. 410.

Light ferruginous-red; head more quadrate than in S. unicolor, a little broader, longer than broad, flatter and nearly straight in the lateral posterior part, with moderately deep and close punctures and without any impression in the anterior part; the eyes are not very protuberant; the prothorax is moderately thick, convex, and has a median longitudinal impression; elytra elongated, very parallel, abruptly truncate at the apex, plane, with the intervals between the striæ a little convex. Length $7\frac{1}{2}$ mm.; width 2 mm.

Hab. N'Gamiland.

TRIBE GALERITIDES.

Ligula horny; paraglossæ sometimes free, sometimes adhering to the ligula, and seldom longer; head produced behind in a distinct neck, two supra-orbital setæ; first joint of antennæ as long or longer than the head; elytra truncate at apex; legs long or moderately long; tarsi slightly dilated in male; claws simple, but pectinate in *Dendrocellus*. Of the thirteen genera included in that tribe by Lacordaire, five are represented in South Africa.

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1896.]

| Mentum without any median tooth. | |
|--|---------------|
| Fourth joint of anterior tarsi bilobate. | |
| Claws not pectinate | Drypta. |
| Claws pectinate | Dendrocellus. |
| Fourth joint of anterior tarsi not lobated | Eunostus. |
| Mentum with a median tooth. | |
| Tooth of the mentum bifid; paraglossæ quite free | Galerita. |
| Tooth of the mentum short, bifid; paraglossæ slender, much | |
| longer than the ligula | Zuphium. |

DRYPTA, Fabric.,

Syst. Eleuth., i., 1801, p. 230.

Mentum with a moderately broad incision and without any median tooth; ligula slender, slightly dilated at the tip; the paraglossæ shorter than the ligula and not adhering to it; mandibles long, straight and incurved at right angles at the tip; last joint of maxillary and labial palpi more or less diagonallo-securiform; labrum tuberculated in the outer angles, projecting in the central part, and with two long setæ on each tubercle and two in the central part; head elongated, with the sides nearly parallel, but narrowed behind into a short neck; prothorax as long as the head and mandibles together, more or less cylindrical, narrowed at the base; elytra subparallel or a little ampliated past the middle, slightly convex, truncated behind, but with the outer angles rounded, striated and briefly pubescent; legs moderately long; tarsi pubescent, with the three basal joints triangular, and the fourth divided in two long slender lobes; claws not pectinate; the three basal joints of the anterior tarsi slightly dilated in the male.

Hab. Representatives of the genus are found in Europe, Africa (Morocco, Senegambia, Zanzibar, Malange, and Abyssinia), Madagascar, India, Burmah, South America, and Australia; they are met with in wet or damp localities.

Synopsis of Species.

| Head and prothorax pale red; elytra pale yellowish red, with a | |
|---|--------------|
| sutural and a lateral dark-green band | distincta. |
| Elytra dark green, with a narrow marginal pale-yellow band and | |
| a subtransverse fascia above the apex | sobrina. |
| Elytra dark green, with a narrow marginal pale-yellow band | nigripennis. |
| Elytra blue or dark blue; legs pale red; elytra costate, deeply | |
| punctured | dentata. |
| Elytra hardly costate, finely shagreened | capicola. |
| Totally dark green; legs pale yellow, infuscate at the knees | melanarthra. |
| Neck and prothorax red, the latter shorter | collaris. |
| Prothorax only red, very short | brevis. |
| Head and elytra green or blue; prothorax red; neck and | |
| prothorax purple, the latter very long and narrow | ruficollis. |

DRYPTA DISTINCTA, Rossi,

Mant., i., p. 83.

D. plagiata, Klug, Jahrb., i., p. 52, 1834.

D. africana, Bohem., Insect. Caffr., i., p. 28, 1848.

Head, mandibles, palpi, and prothorax yellowish red; antennæ flavescent, with the apical part of the first and third joints black; head and prothorax briefly pubescent, closely punctured, the latter ampliated in the middle, constricted behind, and with a median, narrow, longitudinal groove in the centre, and often a depression in the anterior part of the disk; elytra twice as broad as the prothorax at the base, ampliated behind from about the middle, very slightly convex, deeply punctato-striate, with the intervals convex and finely punctulated, briefly pubescent, pale yellowish red, with a sutural dark green band somewhat dilated at the base, narrowed at about the median part, and broadening behind in a triangular patch, also a lateral supra-marginal narrow band of the same colour, broadening a little past the middle and reaching as often as not the posterior angle; pectus and abdomen dark green; legs pale yellowish red. Length $8\frac{1}{2}$ -9 mm.; width $3\frac{1}{4}$ - $3\frac{1}{2}$ mm.

Hab. This species has a very wide range, being recorded from Senegal, Abyssinia, Morocco, Spain, and Sicily. In South Africa it has been captured in the Cape Colony (Constantia), Natal (Frere) Transvaal (Pretoria), and Mozambique (Rikatla).

DRYPTA SOBRINA.

Head, mandibles, palpi, and prothorax yellowish red; antennæ rufescent, with the apical part of the first and third joints infuscated; head and prothorax briefly pubescent, closely punctured, the latter a little ampliated in the middle, constricted behind, and with a median, narrow, longitudinal groove in the centre; elytra twice as broad as the prothorax at the base, ampliated behind from about the middle, very slightly convex, deeply punctato-striate, with the intervals convex and finely punctulated, briefly pubescent, dark green, with a narrow, pale red, supra-marginal band, and a diagonal band of the same colour running at a little distance from the apical margin, uniting with the supra-marginal lateral band at the suture but not in the lateral margin; metasternum and abdomen dark green, pubescent; legs pale red; tibiæ and basal joints of tarsi black. Length 10 mm.; width 4 mm.

Hab. Cape Colony (Cape Town).

This species forms a link between *distincta* and *nigripennis*; while nearer in colouring to the latter, it still retains trace of the pale yellowish colour of the former, overrun by the spreading on each side of the sutural and lateral green margin.

DRYPTA NIGRIPENNIS, Chaud., Bull. Mosc., 1877, p. 262.

D. plagiata, var. nigripennis, Chaud., l.c.

Head, palpi, and prothorax pale red; antennæ rufescent, with the apical part of the first and third joints infuscated; head and prothorax briefly pubescent, closely punctured, the latter a little ampliated in the middle, constricted behind, and with a median narrow groove and a depression in the anterior part of the disk; elytra twice as broad as the prothorax at the base, ampliated behind from about the middle, very slightly convex, deeply punctato-striate, with the intervals convex and finely punctulated, briefly pubescent, dark green, with a narrow pale-red margin running on each side from the base to the apex of the suture; metasternum and abdomen dark green, pubescent; legs yellowish red, and occasionally with the tibiæ infuscated. Length 9 mm.; width 4 mm.

Hab. Cape Colony (Constantia).

DRYPTA DENTATA, Rossi,

Mant. i., p. 83, i., fig. E; Jacq. Duval Genera, i., pl. 21, fig. 104.

D. jucunda, Bohem., Insect. Caffr., part i., p. 27.

Dark green or yellowish blue; mandibles, palpi, legs, and labrum yellowish red; antennæ rufescent, with the basal joint infuscate at the tip, but occasionally rufescent also; head and prothorax pubescent, deeply punctured, the latter part a little ampliated in the anterior part, broadly narrowed near the base, and with a distinct longitudinal median groove; elytra briefly pubescent, twice as broad as the prothorax at the base, a little ampliated behind, but not to such a degree as in *distincta* from about the middle, slightly convex, deeply punctato-striate, with the punctures of the striæ broad and deep and the intervals convex; under side dark blue, pubescent. Length $8-8\frac{1}{3}$ mm.; width 3 mm.

Like *D. distincta*, this species has a very large range. It is found in Europe, probably in Senegal, and in South Africa.

One example has been received from Natal, in which the elytra are a little darker and the basal joint of antennæ immaculate, it is D. jucunda, Bohem.; the difference is, however, too small to separate it from D. dentata.

Hab. Cape Colony (Cape Town, Stellenbosch), Natal (Maritzburg).

DRYPTA CAPICOLA.

Cœrulean blue, with the palpi, apex of mandibles, antennæ, and legs red; head and prothorax very briefly pubescent, very deeply and closely punctured, the latter a little more ampliated in the anterior part than in *D. dentata*, more roughly punctured, and with the longitudinal median groove deeper and broader; elytra briefly pubescent, twice as broad as the prothorax at the base, a little ampliated behind from about the middle, slightly convex, striated, with the intervals hardly raised and finely shagreened, and the striæ hardly punctured; under side dark blue. Length 8 mm.; width 3 mm.

Allied to *D. dentata*, but the shape of the prothorax is slightly different and the punctuation rougher, the striæ of the elytra are hardly punctured, and the intervals almost plane and finely shagreened.

Hab. Cape Colony (Cape Town).

DRYPTA MELANARTHRA, Chaud., Bull. Mosc., 1861, ii., p. 548.

D. dilutipes, Motsch., Bull. Mosc., 1864, iii., p. 217.

Dark metallic green, briefly pubescent; mandibles and palpi reddish; antennæ rufescent, with the apical part of the first and third joints black; head and prothorax deeply and roughly punctured, the latter very slightly ampliated in the anterior part, and with a very distinct, median, longitudinal groove; elytra twice as broad as the prothorax at the base, very slightly ampliated past the middle, moderately convex, narrowly punctato-striate with the intervals convex and closely and deeply punctured; under side dark green, pubescent; legs pale yellow, with the apical part of the femora infuscated, and the tarsi slightly darker than the legs. Length 10 mm.; width 3 mm.

Hab. Natal (Frere), Zambezia (Salisbury).

DRYPTA RUFICOLLIS, Dej., Plate III., fig. 2. Spec. Col., v., p. 92.

? D. thoracica, Bohem., Insect. Caffr., i., p. 30.

Head dark blue, rugose with the neck and mandibles; palpi and antennæ, with the exception of the infuscated apical part of the first and third joints, red; prothorax subcylindrical from the apex to two-thirds of its length, narrowed above the basal part, closely punctured, without trace of a median longitudinal groove, bright red with a purplish tinge; elytra elongated, nearly parallel, moderately convex, punctato-striate with the intervals very little convex and broadly punctured, metallic green, briefly pubescent with the scutellum and the basal part round it reddish; under side red; abdominal segments dark green; legs yellowish red, with the apical part of the femora broadly infuscate. Length 10–11 mm.; width $2\frac{3}{4}$ -5 mm.

Hab. Natal (D'Urban, Frere), Mozambique (Likatla), Zambezia (Salisbury).

DRYPTA BREVIS.

Differs from *D. collaris* in the general facies, which is short and proportionally broader; the head is more broadly punctured, dark green, and has no red neck; the prothorax is more ampliated in the anterior part, and has a distinct longitudinal groove altogether wanting in *D. collaris*; the elytra are nearly parallel, short, moderately convex, briefly pubescent, punctato-striate, with the intervals a little convex and deeply punctured; under side and legs as in *D. collaris*. Length 7 mm.; width $2\frac{1}{2}$ mm.

Hab. Natal (Frere).

DRYPTA COLLARIS, Klug,

Jahrb., i., 1834, p. 33.

Head roughly punctured, bright metallic bluish green, with the neck, labrum, mandibles, and palpi red; antennæ, with the exception of the apical part of the first joint, which is infuscated, rufescent; prothorax cylindrical from the apex to two-thirds of the length, narrowed above the base, briefly pubescent, deeply punctured with an extremely narrow, hardly defined groove, and red with a deep purple tinge; elytra elongated, very slightly ampliated past the middle, moderately convex, punctato-striate, with the intervals very convex and rugose, bright greenish blue and very briefly pubescent; under side red; abdomen dark blue; legs red with the apical part of femora infuscate. Length 14 mm.; width 4 mm.

Closely allied to *D. ruficollis*, and mainly distinguished from it through the more cylindrical, narrower, and longer shape of the prothorax, which is also more deeply purplish red; the intervals of the elytra are also more convex.

Hab. Natal (no exact locality).

GEN. DENDROCELLUS, Schm.-Goeb.

This genus differs from Drypta mainly through the claws being pectinated; the facies is more slender, and the basal joint of the antennæ longer.

DENDROCELLUS AUSTRALIS.

Head roughly punctured, bright metallic bluish green, with the mandibles, labrum, neck, and palpi red; antennæ rufescent with the

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exception of the apical part of the basal joint, nearly the whole of the second and third are infuscated; prothorax slender, cylindrical from the apex to two-thirds of the length, narrowed above the base, briefly pubescent, deeply punctured with an extremely narrow, hardly discernible median groove, red with a purplish tinge; elytra elongated, very slightly ampliated from the middle, moderately convex, punctato-striate with the intervals plane and closely punctured, almost shagreened, very briefly pubescent, and bright green; under side red, abdomen dark blue, base of femora red, the remainder and the tibiæ black, with the tarsi infuscate. Length 12–13 mm.; width $3\frac{1}{4}$ -4 mm.

D. australis is probably a slight variety of *D. Bocandei*, Laf., from Senegal and Old Calabar. Its likeness to *Drypta ruficollis* is so great that but for the pectination of the claws of the tarsi it would be difficult to distinguish between them.

Hab. Natal (Maritzburg), Mozambique (Lourenço-Marquez).

GEN. EUNOSTUS, Castelnau, Etudes Entom., 1835, p. 142.

Mentum with the lateral lobes ampliated at the base, narrowing towards the apex, the tips very sharp and without a median tooth; ligula rounded at the apex, plurisetose; paraglossæ membranaceous, very long and narrow, much longer than the ligula and detached from it; palpi long, with the last joints in the shape of an elongated triangle, that of the labial as long and the maxillary one twice the length of the penultimate one; mandibles short, broad, straight; labrum transverse; head triangular, with a narrow short neck; antennæ half the length of the body, the first joint long; prothorax as broad as long, narrowed behind, the anterior angles rounded, the posterior ones not much pronounced; elytra elongato-quadrate, truncate behind; legs moderately long; tarsi triangular, closely set, pubescent underneath, the basal joint longer than the others, the fourth one short, not incised; claws not pectinate.

This genus includes two species only, one of which is a native of Madagascar.

EUNOSTUS GUIENZII, Chaud., Bull. Mosc., 1862, p. 307.

Light rusty brown; head rugose, and with two deep impressions in the anterior part; prothorax somewhat angular a little before the median part, rugose on the upper part, grooved in the centre with a deep anterior transverse impression; elytra plane, punctato-striate, with the intervals flat and rugose, posterior femora thickened and dented underneath. Length 10 mm.

Hab. Natal (D'Urban), teste Chaud.

1896.]

GEN. GALERITA, Fabric., Syst. Eleuth., i., 1801, p. 214.

Mentum broad, deeply incised with a short, broad, sub-bifid median tooth; ligula rhomboid, with a long seta on each side of the apex; paraglossæ membranaceous, very slender, nearly as long as the ligula and detached from it; palpi moderately long, the last joint of both maxillary and labial securiform and truncated obliquely; mandibles short; labrum transverse, not incised; antennæ long, moderately slender, the first joint broader and nearly as long as the second and third; head with a distinct neck; prothorax more or less narrowed in front and behind, truncated at the base, with the outer angles acute; elytra oblong, truncated a little obliquely behind, depressed; legs long; tarsi triangular, densely hairy underneath, the fourth one incised; male with the anterior tarsi broader inwardly.

Hab. The genus is represented in Africa (Senegambia, Kordofan, Sierra Leone, Old Calabar, Ashanti, Quango Rio, Uzangara, Kilimanjaro and the Zanzibar mainland), India, North and South America, and Haiti.

> GALERITA LEPTODERA, Chaud., Plate VII., fig. 4. Bull. Mosc., 1861, part ii., p. 559.

Black, moderately shining; head deeply bi-impressed in the anterior part, roughly scrobiculated behind; neck smooth; antennæ with the five basal joints black and hirtose, the others somewhat rufescent and pubescent; prothorax narrow, long, with the apical angles rounded, a little ampliated at about the median part, narrowed behind, with the outer margins acute, recurved, very roughly shagreened and with very short not thickly set hairs, longer and rufescent in the posterior margin; elytra subparallel, a littlebroader at the apex than at the base, plane, costate, with the costæ very sharp and the intervals finely shagreened, and with three or sometimes four series of punctures from which spring short greyishblack hairs; under side punctulated and with short greyish hairs; legs pilose; claws reddish. Length 21 mm.; width 7 mm.

Hab. Mozambique, (Rikatla), Zambezia (Manicaland); also recorded from Guinea and Bagamoyo, that is to say from the West and East Coast of Africa.

There can be little doubt about the identity of *G. leptodeura*, Chaud., with *G. angustipennis*, Gerst.

GEN. ZUPHIUM, Latreille,

Gen. Crust., i., 1806, p. 198.

Mentum broad, with a short, median bifid tooth; ligula square,

of the Coleoptera of South Africa.

1896.]

truncated at the tip; paraglossæ slender and longer than the ligula; last joint of palpi long, triangular; the penultimate maxillary joint very long; mandibles short, sharp; labrum transverse, with a series of short bristles; head subtriangular with a very distinct neck; antennæ shorter than the body, the first joint very long, thickened at the top, and with a long inner seta; prothorax flattened, elongated, subcordiform, with the anterior margin straight, and the posterior angles protruding and very acute; elytra elongated, parallel, plane, truncated behind and briefly pubescent; legs moderately long; femora thickened in the centre, tarsi long, filiform; the basal joints of the anterior pair slightly dilated in the male.

Hab. The genus is represented in Southern Europe, Africa (Algeria, Egypt, Senegambia), Asia Minor, India, Burmah, Australia, Celebes Island, and North and South America.

Synopsis of Species.

| Head black. | |
|--|-----------|
| Elytra brownish black, with a very narrow marginal band and an | |
| ovate reddish dorsal patch in the anterior part | Bohemani. |
| Elytra with a narrow lateral red margin broadening at the apical | |
| part, and an ovate reddish dorsal patch in the anterior part | caffrum. |
| Elytra uniformly brick-red | brunneum. |
| Head pale red. | |
| Elytra light brown, with the suture and a broad transverse pos- | |
| terior band infuscated | ustum. |
| | |

ZUPHIUM BOHEMANI, Chaud., Bull. Mosc., 1862, iv., p. 315.

Z. bimaculatum, Bohem., Insect. Caffr., i., p. 31.

Head black, a little shining, punctulated, bi-impressed in the centre; labrum, neck, palpi, legs, and under side testaceous red; prothorax also red, very finely and closely punctured, grooved in the centre; subcordiform, with the posterior angles sharp and protruding; elytra elongated, parallel, plane, very briefly pubescent, striated, black, with a very narrow lateral and posterior reddish margin, and also an elongated reddish patch on each side extending from the third to the fifth interval at equal distance from the base and median part. Length 13 mm.; width 5 mm.

Hab. Interior of Caffraria, teste Bohem.

ZUPHIUM CAFFRUM, Bohem., Insect. Caffr., i., p. 31.

Head very shining, punctulated, black, with the anterior part, neck, palpi, antennæ, prothorax, legs and under side testaceous red; prothorax very closely and finely punctured, subcordiform, with the

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posterior angles very acute and projecting; elytra elongated, plane, very slightly striated, briefly public public plane, with a narrow marginal red band, broader behind, and dilated triangularly at the apical part of the suture, also a discoidal patch of the same colour on each side a little below the base, and reaching from the third interval to almost the outer marginal band. Length 9 mm.; width $3\frac{1}{2}$ mm.

Closely allied to Z. Bohemani, but the red marginal band is wider, and broadens in the shape of a triangle near the apex of the suture.

Hab. Interior of Caffraria.

ZUPHIUM BRUNNEUM, Bohem., Insect. Caffr., i., p. 33.

Totally testaceous red, with the exception of the head, which is black or very dark brown; prothorax very closely but not deeply punctured, subcordiform, hardly grooved in the centre and briefly pubescent; elytra subparallel, slightly striated and finely shagreened. Length $7\frac{1}{2}$ mm.; width $3\frac{1}{2}$ mm.

Hab. Interior of Caffraria.

ZUPHIUM USTUM, Klug, Jahrb., 1834, p. 67.

Yellowish red; head and prothorax slightly punctulated, very briefly pubescent; elytra parallel, plane, with well-defined striæ and intervals, slightly shagreened and briefly pubescent, with three long setæ at the humeral angle, two on the posterior part of the lateral margin and two or three in the posterior one, yellowish red, with a sutural narrow band a little dilated at the base, and coalescing at about the median part of the length, with a very broad, transverse fascia extending from one outer margin to the other, but not reaching the apical margin, and obliquely incised on each side of the suture. Length $7\frac{1}{2}$ mm.; width 3 mm.

Hab. Interior of Caffraria.

TRIBE HELLUONIDES.

Ligula thick, broad, horny; paraglossæ * very short or very long, slender, detached from the ligula; labrum very long, covering the

* Lacordaire states that in the *Helluonides* there is no paraglossæ. In the genera *Meladroma* and *Triænogenius* the paraglossæ exist, and their shape is very singular. In *Macrocheilus dorsalis* the paraglossæ are also found, but they are almost transparent and very minute. I have not been able to dissect the unique example of *M. biplagiatus*, which I have seen, as it belongs to the Stockholm Museum. In *Planetes* the paraglossæ are considerably longer than the ligula.

*[*1896.]

of the Coleoptera of South Africa.

mandibles; palpi thick; labial palpi projecting from a basal excavation on each side of the ligula; mentum with the lateral lobes very long, nearly straight, and a median tooth nearly as long as the lateral lobes; head with two supra-orbital setæ; antennæ massive; the apical joints a little compressed; prothorax short, more or less cordiform; elytra hardly convex, truncate behind; no wings except in Planetes; * tarsi thick, triangular; claws not pectinate.

This tribe is represented in South Africa by four genera, three of which have very close affinity; in fact the differences are more in general facies than in generic characters, and perhaps it would be well if the genus *Macrochilus* were made to include *Meladroma* and *Triænogenius*. *Planetes*, however, is very different.

Synopsis of Genera.

Mentum with a long, acute, median tooth.

Prothorax narrowed behind.

| Posterior angle projecting above the base tarsi, hairy under- neath Prothorax cordiform, posterior angle not projecting above the | Macrochilus. |
|---|--------------|
| base. Tarsi hairy underneath | |
| Mentum without any median tooth. Prothorax a little broader near the apex than at the base, | |
| with the anterior sides rounded | Planetes. |

GEN. MACROCHILUS, Hope,

Coleopt. Man., ii., 1838, p. 166.

Ligula long, broad, horny; the anterior margin slightly sinuated with two setæ near the centre and the outer angles rounded, not very concave on the anterior part, the basal part hollowed on each side, paraglossæ very small and almost pellucid, last joint of labial palpi thickened and truncated obliquely, that of the maxillary nearly twice as thick as the labial, labrum very long, convex; prothorax broader in the anterior part, with the sides rounded, not much attenuated towards the basal part, where the outer angle projects above the base; elytra parallel, plane, striato-punctate, truncate behind; tarsi triangular, hairy underneath.

The genus is represented in Africa (Senegal, Abyssinia, Guinea), India, Java, and China.

Synopsis of Species.

| Ely | tra black, with | an | ovat | e r | eddish | spot | on o | each | side | ; legs | tes- | |
|-----|------------------|-----|------|-----|--------|------|------|------|------|--------|------|-------------|
| | taceous red | •• | • • | •• | | •• | •• | •• | | | •• | bilpagiatus |
| Tib | iæ and tarsi inf | usc | ate | •• | ••• | •• | •• | • • | | | •• | hybridus. |

* This applies to the South African species only.

1896.]

| Elytra yellowish red, | with | a b | road, | sut | ural | blac | ek pa | atch. | | | |
|-----------------------|------|-----|-------|-----|------|------|-------|-------|----|----|-----------|
| Patch narrow | | •• | •• | ••• | | •• | •• | •• | •• | •• | dorsalis. |
| Patch very broad | | •• | •• | •• | •• | •• | •• | ••• | •• | •• | proximus. |

MACROCHILUS BIPLAGIATUS, Bohem., Insect. Caffr., i., p. 66.

Brick-red; the elytra black, with a round yellow patch in the centre of each; antennæ with the first basal joint redder than the others; head with a deep transverse impression above the epistome, deeply and broadly punctured and dotted with a few short, scattered hairs; prothorax slightly pubescent, truncate at the apex; cordiform, plane on the disk with the margins sharp, deeply impressed on each side of the base, slightly grooved in the centre, and covered with broad punctures; elytra parallel, plane, briefly pubescent; the outer margin with a series of long, distant, fine bristles, deeply striate with the intervals more carinated from the base to the median part than from the median part to the apex where they are convex, and each with two series of punctures, the outer ones broader than the inner ones in the anterior part, but both of equal size and depth in the posterior part; they are black, shining, and have on each side between the base and the median part a round, yellowish-red patch extending from the second to the eighth interval. Length 13 mm.; width 5 mm.

Hab. Caffraria.

MACROCHILUS HYBRIDUS.

Piceous black, moderately shining, thickly pubescent; terminal joints of antennæ dark ferruginous, four basal ones piceous; tibiæ and tarsi piceous; femora flavescent; palpi piceous, reddish at apex; head with deep, not closely set punctures; prothorax cordate, a little sinuate at apex, truncate at base, deeply and irregularly punctured, thickly pubescent; elytra a little broader than the prothorax at base, parallel, depressed, striate with the intervals nearly plane but with a double series of punctures, very thickly pubescent, piceous black like the rest of the body and with a median ovate yellow patch extending in width from the second to the seventh stria, but with the apical part a little nearer the base than the basal one to the apex. Length 11 mm.; width 3 mm.

Smaller and much narrower than M. biplagiatus; the legs are also of a different colour.

Hab. Natal (Escourt).

MACROCHILUS DORSALIS, Klug,

Jahrb., i., p. 77.

Brick-red; elytra yellowish red, and with a black sutural band

covering two intervals on each side from the base to about one-third of the length, expanding there as far as the fifth interval, and produced backwards in an elongated obtuse triangle, the apex of which does not reach quite the posterior margin; antennæ red, briefly pubescent; labrum smooth; head deeply punctulated; prothorax truncate at the apex, with the anterior angles rounded, a little ampliated for about two-thirds of the length, the remaining third part straight with the posterior angle projecting above the base, broadly impressed in the centre with a fine median groove, a transverse impression in the anterior part and two slight depressions on the base, with the outer margins sharp, deeply and closely punctured, and very briefly setulose; elytra a little broader than the prothorax, parallel, flat, deeply punctato-striate with the intervals nearly plane, equal, and having each two series of punctures. Length 10 mm.; width 4 mm.

Hab. Cape Town, found under a stone in marshy ground.

My example of this species corresponds exactly with the one I have seen in De Chaudoir's collection, under the name M. dorsalis, Klug.

It is thus most probable that the habitat "India orientalis," as given in the Munich Catalogue, is erroneous.

MACROCHILUS PROXIMUS.

Shape and colour of M. dorsalis; the punctures on the head and prothorax are slightly deeper; the intervals of the elytra are more raised, the punctures are deeper, the sutural black patch has become a discoidal one, reaching on each side the fourth stria from the base to about one-fourth of the length, and ampliated obliquely from there to near both the lateral and posterior margins, the yellow background being thus reduced to a lateral humeral band, united to a diagonal posterior one by a narrow margin; abdomen slightly infuscate. Length 11 mm.; width 3 mm.

Hab. Natal (D'Urban).

GEN. MELADROMA, Chaud., Bull. Mosc., 1877, i., p. 247.

Ligula broad, long, horny, deeply sinuated in the anterior margin, with two setæ near the centre, and the outer angles either very sharp (*lugubris*) or moderately rounded (*consobrinus*), very concave in the anterior part, and with the basal part deeply hollowed on each side; paraglossæ membranaceous, narrowly triangular, disconnected with the ligula and nearly one-third as long, long lateral lobes, rounded outwardly, straight inwards, and with a slender, acute median tooth nearly as long as the lateral lobes, the last joint of the

1896.1

palpi thickened and truncate at the tip, labrum long; convex oblong; prothorax cordiform, narrowed at the base; elytra punctato-striate with the intervals raised; legs moderately long, tarsi thick, clothed with bristles underneath, the three * basal joints of the anterior tarsi of the male with a narrow median series of lamellæ.

This genus is represented in Senegambia and West Africa.

Synopsis of Species.

| Elytra parallel, intervals eq | ual | | •• | •• | •• | •• | •• | lugubris. |
|-------------------------------|-------------|---------|--------|-----|------|---------------|----|--------------|
| Elytra ampliated, intervals | equal | | •• | •• | •• | •• | •• | Gerstaekeri. |
| Elytra ampliated, alternate | e intervals | s highe | r than | the | othe | \mathbf{rs} | •• | agnatus. |

MELADROMA LUGUBRIS, Schaum., Pl. 3, fig. 4, Berl. Ent. Zeit., 1863, p. 79.

Helluo grandis, Bohem., Insect. Caffr., i., p. 66.

Totally black, shining; labrum smooth; head covered with broad, closely set punctures; prothorax deeply and closely punctured, broader than long, gradually narrowed from the apex to two-thirds of the length, the lateral basal part straight and with an angular projection above the outer angle, which is also sharp, depressed, and having a deep impression on each side of the base, a transverse one in the anterior part, and a fine narrow longitudinal groove; elytra parallel, narrowly punctato-striate, with the intervals carinated from the base to about the middle with the exception of the seventh interval which is sharp from base to apex, more convex from the median part, and each interval with one series of deep briefly setigerous punctures in the anterior and two in the posterior part, outer margin with a double series of broad punctures; under side and legs black, shining, briefly pilose. Length 24–29 mm.; width 7–9 mm.

Hab. Transvaal (Potchefstroom), Zambezia (Victoria Falls, Buluwayo), Ovampoland.

MELADROMA GERSTAEKERI, Chaud., Bull. Mosc., 1877, i., p. 248.

This species, according to De Chaudoir, *loc. cit.*, agrees in nearly all particulars with M. *lugubris*; but the elytra are shorter, ampliated behind, with the outer sides somewhat rounded, and the striæ are not so deeply punctured.

Hab. South Africa, teste Chaud.

* Chaudoir says that these lamellæ are found on the four joints. Such is no the case in the four males which I have examined.

MELADROMA AGNATUS.

Black, shining; apical part of the palpi and last joint of antennæ reddish brown; labrum smooth; head coarsely and deeply punctured; prothorax cordiform, truncate at the base with the posterior angle sharp, very roughly punctured, and with a broad median depression reaching from the apex to nearly the base, and without any transverse impression in the anterior part, nor lateral ones near the base; elytra a little ampliated from the base to two-thirds of the length, and from there slightly narrowed towards the apex, very little convex, costate with the alternate costæ very sharp, smooth, and with one series of small punctures on each side, the others more convex, and with a double series of broad punctures; under side and legs black, punctulate. Length 18–22 mm.; width 7–10 mm.

Hab. Ovampoland (Okovango River).

GEN. TRIÆNOGENIUS, Chaud., Bull. Mosc., 1877, i., p. 249.

Ligula broad, horny, sinuated in the central part, with the angles rounded, not concave anteriorly, and with the basal part deeply hollowed on each side; paraglossæ small, not quite half as long as the ligula, with the tip lanciform and projecting a little, mentum and palpi of *Meladroma*; antennæ massive; labrum elongated, but shorter than in *Meladroma* and *Macrochilus*, and more rounded at the tip; prothorax cordiform; elytra gradually ampliated from the base to long past the middle, costate; legs moderately long, tarsi triangular, not bristly underneath, but the median part of the three basal joints of the anterior tarsi of the male with lamellæ.

The partial absence of bristles under the tarsi is really the most important characteristic of this genus.

Two more species of this genus are recorded—one from Benguela (Angola), and the other from Uzagara (Eastern Africa).

Synopsis of Species.

| Intervals of elytra plane, and with one series of pu | inctures | on | |
|--|----------|----|---------------|
| each side | •• •• | •• | corpulent us. |
| Intervals alternatively convex and carinate | ••••• | •• | vicinus. |
| Intervals plane, and with three series of punctures ea | ch | •• | lugubrinus. |

TRIÆNOGENIUS CORPULENTUS, Chaud. Plate III., fig. 3.

Bull. Mosc., 1877, i., p. 249.

Black, shining; labrum smooth; apical part of palpi slightly

reddish; head very closely and deeply punctured; prothorax onethird broader than long, ampliated in the anterior part for about two-thirds of the length, and with the lateral remaining part straight, slightly impressed transversely in the anterior part, with a broad, central, longitudinal depression including a narrow, median groove, a depression on each side of the base and the outer angle nearly rounded, roughly punctured, the punctures very briefly setigerous; elytra moderately convex, rounded in the anterior angles, gradually ampliated to a short distance from the apex, with the outer sides moderately rounded, narrowly punctato-striate with the intervals broad, equal, convex, and having one series of punctures on each side, outer margin rugose and with a double series of broad punctures; under side and legs black, rugose and briefly pilose. Length 24– 26 mm.; width 9–12 mm.

Hab. Orange Free State (Parys), Transvaal (Klerksdorp, Middelburg, Potchefstroom, Zoutpansberg), Zambezia (Victoria Falls), Ovampoland.

TRIÆNOGENIUS VICINUS.

Head shining; labrum smooth; apical part of palpi slightly reddish; head very closely and deeply punctured; prothorax onethird longer than broad, ampliated in the anterior part and narrowed behind as in T. corpulentus; elytra elongated, not much convex, rounded in the anterior angles, gradually ampliated to a short distance from the apex, but with the outer sides not hardly rounded, narrowly striato-punctate with the third, fifth, and seventh intervals narrow, smooth, carinate from the base to past the middle and with one series of punctures on each side, the alternate intervals convex, and with several series each of closely set, deep punctures. Length 19 mm.; width 7 mm.

Closely allied to T. anthioides, Chaud., from which it differs mostly on account of the alternate carinated intervals.

Hab. Transvaal (Middelburg), Zambezia.

TRIÆNOGENIUS LUGUBRINUS, Bohem.

Polyhirma lugubrina, Bohem., Vet. Acad. Förh., 1860, p. 9.

Black, shining; apical part of the palpi and four ultimate joints of antennæ reddish; head very closely and deeply punctured, labrum smooth; prothorax cordiform, but the basal part more elongated than in either T. corputentus or T. vicinus, the transverse anterior impression, as well as the posterior lateral ones, hardly pronounced; elytra gradually broadening from the base to long past the middle, and also narrowed from there, the anterior angles rounded, a little convex, narrowly punctato-striate, with the intervals **convex**, equal, and each one with three series of closely set, more or

less confluent, deep punctures; under side black, with a rusty tinge; tarsi dark brown. Length 14 mm.; width 5 mm.

Hab. Damaraland (Svakop); northern part of Great Namaqualand.

GEN. PLANETES, McLeay, Annul. Javan., p. 28.

Ligula moderately long, horny, gradually narrowed from the base to the apex, where it is about one-third narrower, sinuate, with a long stiff bristle on each side at the tip and four more on each lateral side; paraglossæ filiform, twice as long as the ligula, curving above it at the tip, but entirely separated from it from the very base, membranaceous, but horny towards the tip, palpi moderately long, thick, with the last joint moderately swollen and abruptly truncate; head ovate, labrum broader than long, with the anterior part slightly sinuose, joints of antennæ compressed; prothorax more quadrate than cordiform; elytra elongated, parallel, wings under the elytra depressed, subtruncate behind, and shorter than the anal segment; legs moderately long, joints of anterior tarsi short, triangular, those of the median and posterior ones more elongated.

In the male the joints of the anterior tarsi are broader, and the three basal ones have underneath, on the inner side only, a row of lamellæ.

Hab. The genus is represented in Hongkong, Ceylon, Java, and the Malacca peninsula, and also on the Zanzibar mainland.

Synopsis of Species.

> PLANETES QUADRICOLLIS, Chaud., Rev. et Mag. Zool., 1878, p. 191.

Head piceous, black, shining, punctulated, with the apical part, labrum, mandibles, palpi, antennæ, and legs brick-red; prothorax very closely punctured, covered with a short, thick pubescence, piceous, with the outer margin reddish; elytra elongate, depressed, subparallel, slightly broader at the base than the prothorax at its widest part, each elytron with six moderately raised costæ with two smaller ones in the intervals, and all the costæ with yellowish-brown short hairs, black with a brown tinge, and with a subquadrate, discoidal reddish patch placed a little above the median part and reaching from the second to the fifth costa; under side black, punc-

tulate; the last abdominal segment red on the upper and under part. Length 11-12 mm.; width $3\frac{1}{4}-3\frac{1}{2} \text{ mm.}$

Hab. Mozambique (Rikatla).

This species was originally described from an example captured in the island of Pemba (Zanzibar coast).

PLANETES LIMBATUS.

Head, prothorax, antennæ, and legs brick-red; head nearly smooth; prothorax closely and finely punctulate, very briefly pubescent; elytra elongate, depressed, subparallel, slightly broader at the base than the prothorax at its widest part, each elytron with seven costæ and two smaller ones in the intervals, and all the costæ briefly pubescent, black, with a narrow marginal brick-red band reaching from near the scutellum to the apical suture; under side brownish red, with the three apical abdominal segments infuscate and the superior part of the last one brick red. Length 9 mm.; width 3 mm.

Hab. Mozambique (Rikatla).

TRIBE BRACHINIDES.

Ligula long, membranaceous, horny in the centre, fused with the paraglossæ; palpi more or less thick; mandibulæ sharp at the tip, not much bent inwardly; antennæ filiform, setulose, with the joints more or less elongated; head gradually narrowed behind the eyes, and with one supra-orbital seta; prothorax heart-shaped; elytra truncated at the apex and, with the exception of some *Crepidogaster*, more or less costate.

All the South African *Brachinides*, the genus *Harpax* excepted, have on each side of the head a long bristle above the labrum, which is fringed with six hairs, another one above the eye, and a third one on the outer margin of the prothorax at its broadest part. The first joint of the antennæ has also two setæ, the inner one longer than the outer. The male has eight abdominal segments, and the female seven. The penultimate abdominal segment is short and very broadly incised in the middle in the male, and the three basal joints of the anterior tarsi are more dilated than in the female, although in a very slight degree in some cases, and they have underneath two longitudinal rows of transverse lamellæ.

The facies of *Brachinides* is very distinct from that of all other *Carabidæ*, and they form a very homogeneous group. They are generally gregarious and found in damp, marshy places, often under stones, like the *Ozenides* and *Paussidæ*. They emit by the anal

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opening, when alarmed, a caustic fluid, the emission of which is accompanied by a very audible report which has caused them to be nicknamed "Bombardiers."

The tribe is divided into five genera, but the affinities of these insects to one another are so great that many of the characters relied upon to incorporate them in these divisions vary in different species included in the same genus. It is, however, generally agreed to accept five genera, *i.e.*, Aptinus, Pheropsophus, Brachinus, Mastax, and Crepidogaster. De Chaudoir, in his monograph of the tribe (Annales Soc. Entom. de Belgique, 1876), has added another genus, the characters of which, so far as the African species he includes in it is concerned, seem to me, beyond the general facies, hardly of sufficient importance. Of these six genera, five are represented in South Africa.

Synopsis of Genera.

Mentum without any median tooth; last points of maxillary and labial palpi broadly truncate at the tip Pheropsophus. Last joints of palpi fusiform or subcylindrical, slightly truncate at the tip ··· ·· ·· ·· ·· ·· ·· ·· A median, not much developed tooth in the mentum Last joints of the palpi ovate, acuminate at the tip.. Palpi short, the last joints large-that of the labial broadly

securiform, of the maxillary ovate, transversely truncate at tip Crepidogaster.

Brachinus.

Styphromerus. Mastax.

GEN. PHEROPSOPHUS, Solier,

Ann. Soc. Ent. France, 1833, p. 461, and 1834, pl. xvi. figs. 5 & 7.

Mentum without any median tooth; paraglossæ membranaceous, a little longer than the ligula; palpi thick, with the last of both maxillary and labial truncated, the penultimate one of the maxillary shorter than the ultimate one; labrum flat, obtusely rounded at the apex, and with six setæ; antennæ long, briefly setose, the second joint short, the third one as long as the first two, the other equal; head and prothorax red or yellowish red, smooth, the latter part subquadrate, a little narrowed behind and with a faint median longitudinal groove; elytra broader than the prothorax, nearly always one-third broader at the apex than at the base, truncated more or less obliquely behind, costate, and either black or with yellowish spots or bands.

The genus is represented in Europe, Africa (Egypt, Hab.Senegal, Guinea, Angola, Abyssinia, Zanzibar), Madagascar, India, Java, Philippine Islands, China, Japan, Australia, and South America.

Synopsis of Species.

| Elytra black, without any discoidal yellow patch. | |
|---|------------------------------|
| A narrow postical yellow margin | fastigiatus, Halteri damara. |
| A humeral yellow patch on each side, and a | |
| narrow yellowish outer margin | Dregei. |
| Elytra with basal and discoidal yellow patches. | |
| No yellow outer margin; thorax marginated | |
| with black | Bohemani. |
| Thorax not marginated with black | Planti. |
| Thorax not marginated with black; patch very | |
| small | angolensis. |
| A yellow outer margin; basal and discoidal | |
| patches very small, the latter disconnected from | |
| the outer margin | capensis, laetus. |
| Discoidal patch broad, and connected with the | |
| outer margin | transvaalensis. |
| Elytra with a discoidal yellow patch, but no | |
| basal one, costæ much raised and very narrow | mashunus. |
| | |

PHEROPSOPHUS FASTIGIATUS, Linn.,

Mus. Ludov. Ulr., 1764, p. 97; Oliv., Entom., iii., 35, p. 63, pl. 8, fig. 93.

P. nigripennis, Fabric., Syst. Eleut., i., p. 218.

Head, prothorax, antennæ, and legs brick-red ; elytra black ; head slightly punctulated at the base, with a few strigæ on each side of the eyes ; prothorax very smooth, broader in front than behind ; scutellum reddish at the base, infuscated at the apex ; elytra a little broader than the prothorax at the base, gradually ampliated from the shoulder to the apex, where they are nearly twice as broad, costate, with the costæ smooth and much raised and the intervals very closely aciculate, black, shining, with the apical margin very slightly marginate with pale yellow, the yellowish band ascending a little the sutural part ; under side black, with the pectus more or less reddish. Length * 16–18 mm. ; width $6\frac{1}{2}$ –8 mm.

Hab. Cape Colony (Cape Town, Ceres, Worcester).

Var. Halteri.

Aptinus Halteri, Chaud., Bull. Mosc., 1837, iii., p. 214.

Size and colouring of the *P. fastigiatus*, but the red of head and prothorax is a little lighter; the prothorax has sometimes a very narrow black outer margin; the elytra are a little less ampliated behind, and the postical yellow margin is better defined. Length 17-18 mm.; width 7 mm.

Very closely allied, if not identical with the preceding species.

Hab. Transvaal (Rustenburg), Mozambique, teste Chaud.

* The measurement of specimens of that tribe is taken from the apical part of the head to the apical part of the suture.

Var. P. damara.

Smaller than P. fastigiatus; head, prothorax, and legs very pale red; elytra much more narrow, with the outer sides nearly parallel, and also less convex on the upper part; the postical yellow margin is broader and ascends the sutural part. Length 12–14 mm.; width 5–6 mm.

Hab. Southern Damaraland.

PHEROPSOPHUS DREGEI, Chaud.,

Monogr. Brach., Ann. Soc. Ent. Belg., 1876, p. 29.

Head, prothorax, and antennæ brick-red; legs brick-red, sometimes flavescent; head with a small infuscate frontal patch, often indistinct; prothorax edged with black all round, and with a subtriangular marginal patch at the apex; elytra elongate, more parallel than in the other South African species, black, costate, the costæ shining, the intervals opaque, and having on each side a small humeral yellowish patch connected with the basal margin, the outer margin is narrowly edged with pale yellow from the humeral angle to four-fifths of the length, and the posterior one is also edged with a still narrower band, while the extreme apical part of the costæ is flavescent; under side black; pectus yellow or brick-red. Length 18-20 mm.; width 7-8 mm.

Hab. Mozambique (Rikatla, Lourenço-Marquez).

In some examples the humeral yellowish or brick-red patch is sometimes very indistinct.

PHEROPSOPHUS BOHEMANI, Chaud.,

Plate III., fig. 4.

Monogr. Brach., Ann. Soc. Ent. Belg., 1876, p. 26.

P. insignis, Bohem., Insect. Caffr., i., p. 71.

Head, prothorax, antennæ, and legs brick-red; prothorax narrowly marginated with black on the outer sides, and with a subtriangular patch of the same colour at the apex and base; elytra a little broader than the prothorax at the base, gradually ampliated from the shoulders to the apex, where they are nearly twice as broad, black, shining, with the costæ raised, and having on each side a basal yellowish patch varying in size but nearly always covering three costæ, a median discoidal patch also varying in size, bisinuated, and reaching from the second to the sixth costa, but not reaching the outer margin, and a narrow apical margin of the same colour ascending a little along the tip of the costæ; under side black, with the pectus more or less yellowish. Length 16–18 mm.; width $6\frac{1}{2}$ –8 mm.

Hab. Cape Colony (Griqualand East), Natal (Maritzburg), Transvaal (Rustenburg).

The median discoidal patch varies in width, being at times very narrow.

Var. P. fraudiger.

Size and colouring of *P. Bohemani*; the head has a conspicuous black patch on the vertex; the prothorax is also edged with black; the elytra have a very small basal yellowish patch near the shoulders, no median discoidal patch, and the yellow apical margin is hardly noticeable. Length 17 mm.; width 7 mm.

Hab. D'Urban (Frere).

PHEROPSOPHUS PLANTI, Chaud.

Monogr. Brach., Ann. Soc. Ent. Belg., 1876, p. 22.

Colouring of *P. Bohemani*, and in size a little broader; prothorax without any black margin; elytra of the same shape, but the basal yellow patch is much smaller; instead of a discoidal patch, there are two very small yellowish dots on the sixth and eighth costæ, and the apex is narrowly edged with pale yellow. Length $12-13\frac{1}{2}$ mm.

This variety seems to be subject to great variation. In De Chaudoir's collection there is an example of *P. Planti* in which the basal patch and the discoidal dots are entirely absent.

Hab. Mozambique (Delagoa Bay, teste Chaud.), Transvaal (Rustenburg).

PHEROPSOPHUS ANGOLENSIS, Erichs.,

Wiegm., Arch., 1843, i., p. 212.

Head, prothorax, and legs light red; elytra elongated, very little ampliated past the middle, black, shining, with the costæ raised, and having each a small yellow supra-humeral patch, a moderately broad slightly sinuated discoidal patch reaching from the third costa to the interval next to the outer margin, and a narrow apical margin of the same colour invading the tip of the costæ; under side pale yellow abdomen black. Length 12–16 mm.; width 5–7 mm.

Hab. Damaraland (River Svakop, and southern part of Damaraland) Angola, teste Erichson.

PHEROPSOPHUS CAPENSIS, Chaud.,

Monogr. Brach., Ann. Soc. Ent. Belg., 1876, p. 25.

Head, prothorax, and legs light red; elytra elongated, very narrow, the outer sides nearly parallel, black, shining, with the costæ raised, and having on each side a yellow outer margin reaching from the shoulder to the apex of the suture, a supra-humeral patch

and a discoidal lacerated patch of the same colour extending from the third costa to close to the outer margin, but not connected with it; under side pale yellow, abdomen black. Length 15 mm.; width $5\frac{1}{2}$ mm.

Hab. N'Gamiland.

Var. lætus, Pér.

P. lætus, Pér., Trans. S. Afric. Phil. Soc., 1888, p. 73.

Shape and colouring of *capensis*, but smaller; the discoidal lacerated patch on each elytron is reduced to four dots situated in the fourth, fifth, sixth, and seventh intervals, without invading the intermediate costæ. Length 12 mm.; width 5 mm.

Hab. Damaraland.

PHEROPSOPHUS TRANSVAALENSIS, n. sp.

Head, prothorax, and legs pale yellow; prothorax very little ampliated in the anterior part; elytra elongated, one-third broader at the apex than at the base, black, with the scutellum yellow and having on each side a yellow marginal band reaching from the humeral angle to the suture and ascending each costa to about onefifth of the length, a small supra-humeral patch, and a broad discoidal one reaching from the third costa to the outer margin, with which it is connected; this discoidal patch is twice as broad on the fourth, fifth, and sixth costæ than on the third, seventh, and eighth, and distinctly punctulated; under side pale yellow; abdomen black, with the centre yellowish. Length 15 mm.; width 6 mm.

Hab. Transvaal (Marico).

PHEROPSOPHUS MASHUNUS, n. sp.

Head, prothorax, and legs very light red or yellowish; elytra hardly broader than the prothorax at the base, gradually ampliated behind, where they are nearly twice as broad at the apex than at the base, broadly striate, with the costæ very narrow and much raised, black, and having on each side, in the median part of the disk, a subquadrate slanting yellow patch extending from the fourth to the eighth costæ; pectus pale yellow; abdomen infuscate. Length 16 mm.; width $6\frac{1}{2}$ mm.

In shape this species resembles *P. nigriventris*, Chaud.; but the colouring of the elytra is different, and the costæ are much more narrow, and stand more in relief than in the other South African species.

Hab. Zambezia (Salisbury).

GEN. BRACHINUS, Weber, Observ. Ent., 1801, p. 22.

Mentum nearly straight in the centre, with the lobes diverging, or sometimes with a small median projection; paraglossæ membranaceous, as long as the ligula; palpi slender, long, fusiform and truncated at the tip, the penultimate of the maxillary ones a little shorter than the last one; antennæ as in Pheropsophus; labrum truncate at tip; head aciculate; prothorax always more, or less cordiform, distinctly grooved in the centre, with a depression on each side of the basal part and with the outer margins sharp; elytra subelongated, always broader at the apex than at the base, subcostate; legs of *Pheropsophus*.

Synopsis of Species.

Elytra short, quadrate, pale yellow, a sutural black band, one lateral spot and a transverse fascia on each elytron nobilis. Elytra very elongated; head and prothorax red; elytra black with a basal supra-humeral reddish spot and a red outer margin algoensis. Head yellowish red; elytra black, pubescent obtusus. Head and prothorax red; elytra black, pubescent longulus. Elytra short, very broad in proportion to the length; elytra black, costate, slightly pubescent fuscipennis. Elytra dark green, costate, third and fourth articulation of the antennæ partly black subcostatus. Elytra black with a reddish margin Promontorii. Elytra black with a reddish margin and a supra-apical reddish spot on each side simulans. Elytra with yellow maculæ and a reddish-yellow outer margin; elytra subquadrate with three maculæ, of which the apical is bifid on each side, the outer margin dilated in the middle distinctus. Three maculæ on each side, the supra-humeral one reaching the base and connected with the outer margin caffer. Elytra elongated, three maculæ on each side, the supra-humeral one not reaching the base armiger. Supra-humeral patch extending to half the length of the elytron diffusus. Supra-humeral patch reaching the base Natalicus. Supra-humeral patch connected with the base and outer margin; two postical, diagonal, coalescing patches on each side Rikatlæ. Each elytron with a supra-humeral and a discoidal indistinct inconditus. patches, no apical one Each elytron with a supra-humeral patch only axillaris. •• Each elytron with a supra-humeral and postical patch quadrinotatus. No markings on the elytra, only a reddish margin nigritus. Elytra with yellow maculæ, but without red outer margin ... fallax. Head and prothorax with a black band; a triangular red patch below the scutellum, two red bands on the anterior part, and a transverse sinuate one above the apex on each elytron vittaticollis. Head and prothorax without black band, a triangular red patch below the scutellum, one humeral and one postical red patch on each side placidus.

BRACHINUS NOBILIS, Dej.,

Spec. Col., v., p. 415; Klug, Symb. Phys., iii., t. 22, fig. 4. *Pherops. Alstoni*, Pér., Trans. S. Afric. Phil. Soc., vol. iv., 1888, p. 72.

Very pale yellow on the upper and under side; prothorax short; elytra broad, nearly twice as broad as long, with the outer sides nearly straight, costate, with the intervals slightly and briefly pubescent, of the same colour as the head and prothorax, and with a broad, black, sutural band, beginning from the base, round the scutellum, reaching to about one-third of the length, and on each side a lateral round spot, a little before the middle, extending from the fifth to the eighth interval, and a postical, broad, sinuated band, extending from the suture to close to the outer margin, but not reaching it; this postical band is a very irregular one, often trisinuated, and extends nearer to the apex on the first and second interval, and also on the seventh and eighth, than in the median ones, where, on the contrary, the band is directed towards the base; upper part of the three last abdominal segments infuscated; legs, antennæ, and palpi very pale yellow. Length 12-13 mm.; width 6 mm.

Hab. This species has a very wide range. It is recorded from Algeria, Nubia, Abyssinia, Senegal, Ovampoland (Cunene River), and Cape Colony (Van Wyk's Vley, Modder River).

BRACHINUS ALGOENSIS.

Head, prothorax, legs, palpi, and basal parts of antennæ brickred; elytra elongated, subparallel, highly costate, with the intervals slightly and briefly pubescent; black, shining, with a small, basal, supra-humeral yellowish-red patch, and a moderately broad marginal band of the same colour rounding the apex and ascending a little the apical part of the suture; pectus yellowish red; sides of abdomen infuscate. Length 11–14 mm.; width 5–6 mm.

Hab. Mozambique (Lourenço-Marquez, Rikatla).

BRACHINUS OBTUSUS, Thunb., Nov. Insect. Sp., 1784, p. 74.

B. ruficeps, Fabric., Syst. Eleuth, i., p. 219.

Head, antennæ, and legs yellowish red; prothorax nearly always black, but also sometimes somewhat rufescent in the anterior part; elytra elongated, gradually ampliated from the shoulder to the apex, where they are one-third broader than at the base, covered with a very short yellowish pubescence, costate, but the costæ not much raised and the intervals punctulated; under side black, punctulated;

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central part of the pectus slightly reddish. Length 11-14 mm.; width $4\frac{1}{2}-6$ mm.

Hab. Cape Colony (Cape Town, Stellenbosch, Worcester, Ceres).

BRACHINUS LONGULUS, Chaud.,

Monogr. Brach., Ann. Soc. Ent. Belg., 1876, p. 72.

Head, antennæ, legs, and prothorax brick-red; elytra elongated, but not as much as in *B. obtusus*, gradually ampliated from the shoulder to the apex, covered with a short greyish pubescence, costate, with the costæ moderately raised, black, with the apical margin very slightly yellowish.

Closely allied to the preceding species, from which it differs mainly by the colour of the prothorax. Length 11-12 mm.; width $4\frac{1}{2}-5$ mm.

Hab. Cape Colony (Caledon, Riversdale).

BRACHINUS FUSCIPENNIS, Dej.,

Spec. Col., i., 1825, p. 318.

Head, prothorax, and legs deep red; the apical part of the third and fourth joints of the antennæ, and the apical part of the tibiæ, black or infuscate; elytra black, moderately shining, very faintly pubescent, with the costæ raised, and the intervals very obsoletely aciculate; under side black; central part of the pectus with a triangular reddish patch. Length 6–10 mm.; width $4\frac{1}{2}$ mm.

Hab. Cape Colony (Cape Town, Worcester, Ceres).

BRACHINUS SUBCOSTATUS, Dej., Spec. Col., i., 1825, p. 315.

Head, prothorax, antennæ, and legs red; elytra dark green, moderately shining, costate with the intervals punctulate, the apical margin very finely marginated with yellow; pectus and central part of the three basal abdominal segments reddish. Length 8-9 mm.; width $4-4\frac{1}{2} \text{ mm.}$

Hab. Cape Colony (Cape Town, Worcester, Stellenbosch, Ceres), Damaraland (Walfish Bay).

BRACHINUS PROMONTORII, Pér.,

Trans. S. Afric. Phil. Soc., vol. iv., 1888, p. 74.

Head, antennæ, prothorax, and legs red or deep red; elytra costate, the costæ carinate and the intervals very slightly pubescent, black, shining, and with a marginal reddish band beginning at the humeral angle, rounding the posterior part and ascending the suture to about one-third of its length; sides of the pectus and abdomen infuscate. Length 9-11 mm.; width $4-5\frac{1}{2}$ mm.

Hab. Cape Colony (Cape Town, Ceres).

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BRACHINUS SIMULANS.

Head, prothorax, antennæ, and legs deep red, sometimes testaceous; elytra costate, the costæ moderately acute, intervals slightly pubescent, black, moderately shining, with a narrow reddish marginal band reaching from the shoulder to the apical part of the suture, which is also slightly reddish from the median part to the apex, and with a supra-apical yellowish dot or small patch reaching on each side from the second to the fourth intervals, or occasionally from the second to the third; under side red; sides of the pectus and abdomen infuscate. Length 9 mm.; width 4 mm.

Hab. Mozambique (Rikatla).

Smaller and more elongated than *B. Promontorii*, and having besides a postical yellow patch on each side, entirely wanting in the latter.

BRACHINUS DISTINCTUS.

Head, prothorax, legs, and antennæ pale red; elytra with the humeral angles prominent, ampliated behind, but somewhat subquadrate, very briefly pubescent, costate with the intervals punctulated, moderately shining, black, with a pale yellow supra-humeral patch reaching the base, a round one in the centre of the disk and an arcuated apical patch of the same colour very nearly divided in two and extending from the outer angle to the second interval; the outer margin is very narrow in the anterior part, but broadens very much in the median, where it extends as far as the eighth costa, and is narrowed again in the posterior part; pectus, sides of the abdomen and also the last abdominal segment infuscate. Length 10 mm.; width 5 mm.

This species, although belonging to the same group as *B. caffer* and *B. armiger*, will be easily distinguished.

Hab. Mozambique (Rikatla).

BRACHINUS CAFFER, Bohem., Insect. Caffr., i., 1848, p. 72.

Head, prothorax, legs, and antennæ red; head finely setulose; prothorax short; elytra elongated, one-third broader at the apex than at the base, slightly convex, costate, the costæ acute, shining, the intervals with two series of a short decumbent pubescence, black, with a broad red outer margin reaching from the base to the apex, and having on each side a broad patch of the same colour extending from the fourth interval to the outer margin, merging with it and leaving a visible small humeral spot of the black background, and connected with the humeral part of the base by a narrow line, a discoidal one, round or semi-arcuated below the middle, reaching from the second to the fourth intervals, and a very small elongated

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patch on the outer part of the apical margin; under side pale red, with the lateral parts black. Length 11-15 mm.; width 5-6 mm.

Hab. Natal (D'Urban?), Mozambique (Rikatla), Matabeleland.

B. caffer might at first sight be mistaken for B. connectus, Dej., but it is not so broad; the lateral yellowish-red patch on the elytra is much longer, although of equal width, and the posterior discoidal one is also more elongate.

BRACHINUS ARMIGER, Dej.,

Spec. Col., v., 1831, p. 418.

B. parvulus, Chaud., Bull. Mosc., 1843, iv., p. 713.

 B. venator, Klug, Monatsb. Berl. Ac., 1853, p. 245, Peters' Reise, 1862, p. 149, pl. 10, fig. 1.

Head, prothorax, antennæ, and legs reddish, sometimes reddish yellow; elytra elongated, costate with the intervals punctulate, black, covered with a fine, decumbent, brief, yellowish pubescence, each one with a yellowish-red marginal band reaching from the shoulder to the apex, where it ascends a little along the suture and also in the anterior part, a broad lateral band extending from the fourth to the sixth intervals, connected for half its length with the outer margin but not with the base, below the middle a discoidal more or less oblong patch extending from the third to the fourth intervals, and at the apex a more or less rounded spot of the same colour in the outer part of the apical margin; under side pale yellow; lateral part of the abdomen slightly infuscate. Length 6–9 mm.; width 3–4 mm.

Hab. Cape Colony (Kimberley, East London), Natal (Maritzburg, D'Urban, Frere), Transvaal (Potchefstroom, Pretoria, Marico).

BRACHINUS DIFFUSUS, Chaud.,

Monogr. Brach., Ann. Soc. Ent. Belg., 1876, p. 58.

Shape and colouring of *B. armiger*, the only difference consisting in the size of the anterior dorsal band which is longer in proportion to the size than in *B. armiger*, and reaches to about one-half of the length instead of one-third; the discoidal patch is also rather larger in proportion. Length 6 mm.; width $2\frac{3}{4}$ mm.

De Chaudoir's type is an immature insect. My examples were sent to me with a lot of *B. armiger*.

Hab. Natal (Maritzburg), Transvaal.

BRACHINUS NATALICUS.

Size and colouring of B. armiger; the elytra are less tomentose, the anterior dorsal band reaches the base, and is produced more diagonally towards the suture, and the discoidal patch is arcuated

behind in the form of a blunt crescent; under side pale yellow. Length 8 mm.; lat. $3\frac{1}{2}$ mm.

I have seen one example from Delagoa Bay (Rikatla) in which the circa-scutellary region of the elytra is reddish.

Hab. Natal (D'Urban), Mozambique (Rikatla).

BRACHINUS RIKATLÆ.

Head, prothorax, and legs yellowish red; antennæ with the three basal joints yellowish, the others deeply infuscate; elytra briefly pubescent, slightly costate with the costæ rounded, black, narrowly marginated with yellowish red, and having on each side a long patch of the same colour extending outwardly from the base to about onethird of the length of the fourth dorsal costa, produced diagonally to the second dorsal costa in the median part, and enclosing an elongated humeral black patch (part of the background) and two diagonal coalescing patches covering a little above the apex the space between the second and fourth costæ, the second patch extends from the fourth costa to the outer edge of the apex, and the suture is edged with a red line running from the apex to about one-fifth of the length; abdomen infuscated. Length $4-5\frac{1}{2}$ mm.; width $2-2\frac{1}{4}$ mm.

This pretty little species has been captured near the Rikatla marsh (Mozambique) by the Rev. H. Junod.

BRACHINUS INCONDITUS.

Head, prothorax, and legs dark red; antennæ black, with the three basal joints reddish; elytra elongated, costate, black, very pubescent, each one with a very narrow reddish margin broader round the apex, an anterior lateral band extending from the fourth interval to the outer margin, with which it joins, but does not reach the base, and an ovate, discoidal, subpostical band; under side pale red; abdomen black. Length 11 mm.; width 4 mm.

Allied to B. quadrinotatus, but larger; the head, thorax, and legs are darker red, the pubescence on the elytra is denser, and the coloured patches very indistinct.

Hab. Cape Colony (? Kimberley).

May prove to be a large example of B. quadrinotatus.

BRACHINUS AXILLARIS, Chaud.,

Monogr. Brach., Ann. Soc. Ent. Belg., 1876, p. 64.

B. instabilis, Pér., Trans. S. Afric. Phil. Soc., 1888, p. 74.

Head, prothorax, and legs reddish; elytra elongated, costate, very pubescent, finely marginated with dusky red, and having on each side a lateral, anterior, reddish patch slightly connected with the outer margin but not reaching the base, and sometimes, although seldom, a very indistinct spot on the apical outer angle. Length $6\frac{1}{2}$ -7 mm.; width 3 mm.

Hab. Cape Colony (Oudtshoorn, Stellenbosch).

Var. B. quadrinotatus, Pér., Trans. S. Afric. Phil. Soc., 1888, p. 75.

Shape, size, and colouring of type, and elytra with a similar outer margin and anterior patch, but having also a discoidal more or less rounded subpostical patch, and a very indistinct apical spot on the posterior angle. Length 6–7 mm.; width 3 mm.

This variety is not unlike small examples of B. armiger, but the elytra are more pubescent and the dorsal markings narrower and not so well defined.

Var. nigritus, Pér., Trans. S. Afric. Phil. Soc., 1888, p. 75.

Shape, size, and colouring of the type; the elytra have only a reddish outer margin, and the dorsal markings have disappeared entirely. Length 7 mm.; width 3 mm.

Hab. Cape Colony (Stellenbosch, Constantia, Oudtshoorn).

BRACHINUS FALLAX.

Head and prothorax red; antennæ reddish, with the second, third and fourth joints black; head and prothorax very broadly punctured; elytra elongated, subparallel, black, covered with a long yellowish pubescence, costate, with the costæ narrow and sharp and the intervals deeply punctured, black, with a lateral elongated patch in the anterior part disconnected with the base and extending on the sixth and seventh intervals, and a postical one situated on the fifth, sixth and seventh intervals—both these patches are not always very distinct; under side and legs pale yellow; abdomen infuscate. Length 8–9 mm.; width 4 mm.

Hab. Natal (Frere).

BRACHINUS VITTATICOLLIS, Pér.,

Trans. S. Afric. Phil. Soc., vol. iii., 1885, p. 75.

Head, prothorax, and legs pale yellow; head finely punctulate, slightly pubescent with a postical, median, black patch; prothorax punctulate and with a broad, median, black band; elytra subparallel, very little convex, finely pubescent and very slightly costate, black, with a triangular, yellowish red basal patch round the scutellum, which is also yellowish red, and on each side a lateral band of the same colour reaching from below the shoulder to about one-third of the length and extending from the fifth costa to the outer margin, a small dot on the third interval parallel with the lateral band, and a sinuated supra-apical patch extending from close

to the suture to near the outer margin and produced there in a narrow band that reaches the postical outer angle only; there are also a series of deep impressions in the interval above the outer margin; under side pale yellow, with the lateral sides of the abdomen occasionally infuscate. Length $5\frac{1}{2}$ -7 mm.; width $2\frac{1}{2}$ -3 mm.

Hab. Cape Colony (Cape Town), Mozambique (Rikatla.)

BRACHINUS PLACIDUS.

Head, prothorax, palpi, and legs pale yellow; antennæ with the two basal joints reddish, the others black; head and prothorax finely punctulate; elytra subparallel, faintly costate, very briefly pubescent, black with the scutellum red, and on each side a very narrow reddish line in the anterior part of the suture, an elongated subquadrate patch reaching almost from the shoulder to about onefourth of the length, and a transverse patch of the same colour above the apical part—this patch, a slightly sinuated one, reaches nearer to the outer margin than to the suture; the outer margin is also slightly and narrowly diffused with yellow; under side pale yellow; slightly fuscous on the abdominal sides. Length 5 mm.; width 2 mm.

Closely allied to *B. vittaticollis*, from which it differs in not having any median black patch on the head and prothorax; the circascutellary patch on the elytra is reduced to a narrow line along the basal part of the suture, the small dorsal dot parallel to the lateral anterior band is missing, and the postical patch is not so sinuated, nor does it reach so near to the suture, and the interval next to the outer margin has no punctures.

Hab, Damaraland.

GEN. STYPHROMERUS, Chaud.,

Ann. Soc. Ent. Belg., vol. xix., 1876, p. 88.

Mentum with a median moderately prominent tooth; last joint of the maxillary fusiform, that of the labial truncate; antennæ with the joints more closely set together than in *Brachinus*; the other characters as in that genus.

The importance of the characters which have led De Chaudoir to create this genus is very slight; had he been able to examine *Brachinus vittaticollis*, *placidus*, and *fallax*, he would have found most, if not all, the characteristics of *S. equestris*, a species which occurs also in South Africa.

> STYPHROMERUS EQUESTRIS, Dej., Spec. Col., v., p. 421.

S. rusticorum, Pér., Trans. S. Afric. Phil. Soc., vol. iv., 1888, p. 75. Yellowish red, pubescent; antennæ with the four basal joints pale yellow, the others infuscate; head and prothorax closely punctured, the latter shagreened, and with a small round spot on the disk on each side of the median groove; elytra moderately costate, elongated, each one with a broad, slightly diagonal, yellow humeral band reaching from the base to about the median part, and a more or less rounded postical patch of the same colour above the apical part, both band and patch connected by a broad marginal lateral band which reaches from the base to the apex, the apical margin is also narrowly edged with yellow; owing to the suffusion of the yellow markings, the black background assumes almost the shape of a Maltese cross; under side pale yellow, with the abdomen slightly infuscated. Length 9 mm.; width 4 mm.

Hab. Transvaal (Marico Distr.); occurs also in Senegal and Kordofan.

GEN. MASTAX, Fischer,

Ent. Russ., iii., 1825, p. 111.

Mentum moderately emarginate and provided with a median tooth, broad at the base and acute at the tip; ligula narrow; paraglossæ longer than the ligula; palpi inflated and much acuminated at the tip; mandibles long, acute, with a sharp median tooth in the inner side; antennæ pubescent, the third joint not much longer than the fourth; head rugose; prothorax cordiform, much narrowed behind, and with a median very broad and deep longitudinal groove running from base to apex; elytra subovate, costate, the costæ raised and sharp; legs as in *Brachinus*.

Hab. The genus is represented in Europe (Caucasus), India, Burmah, China, and Africa (Abyssinia).

Synopsis of Species.

Head and prothorax red; legs pale yellow, with the knees infuscate.

MASTAX ORNATELLUS, Bohem.,

Plate VII., fig. 6.

Insect. Caffr., i., 1848, p. 74.

Head red, with the labrum infuscate; antennæ with the two first joints pale yellow, the others infuscate; prothorax red, rugulose; elytra much broader than the prothorax at the base, slightly ampliated in the middle, subconvex, striate, with the costæ raised, black, with a small more or less well-defined whitish basal band on the

second costa, two transverse patches extending from the second to the eighth costa—the first one is between the basal and median part, the posterior one between the median and apical part; the outer margin and also the suture are faintly reddish; under side pale yellow; tip and base of abdomen infuscate; legs pale yellow, with the knees infuscate.

Hab. Natal (D'Urban, Frere), Zambezia (Salisbury).

MASTAX EXTREMUS.

Head, prothorax, and the three basal joints of antennæ bright red; prothorax rugose, hardly grooved in the centre; elytra slightly costate on each side of the suture only, black, opaque, and having on each side a semicircular white band reaching from the scutellum to the outer margin, and a post-median patch of the same colour reaching from the median part of the disk to very near the outer margin; legs infuscate, with the median part of the tibiæ flavescent.

Size and colouring of M. ornatellus, but the prothorax is more shagreened, and hardly grooved behind, while it is distinctly and broadly so in M. ornatellus; the elytra are hardly costate, and this along the suture only, and the anterior white patch reaches from the scutellum to the outer margin, forming almost a half-moon. Length 4 mm.; width $2\frac{1}{2}$ mm.

Hab. Cape Colony (Grahamstown, Uitenhage).

MASTAX ALBONOTATUS, Pér.,

Trans. S. Afric. Phil. Soc., vol. iv., 1885, p. 76.

Totally black, moderately shining; head and prothorax shagreened; elytra much broader at the base than the prothorax, slightly ampliated in the centre, with two raised costæ on each side along the suture, which is also costate, the outer part of the disk covered with a velvety black tomentum, leaving the basal part of the third, fourth, and fifth costæ uncovered, and two transverse, rounded, white spots at the basal edge of the velvety patch, and a transverse band between the median and apical parts, extending from near the margin to about the centre of the disk; in some examples there is a short reddish line on the basal part of the first and second costæ on each side, and the transverse postical white band is sometimes interrupted in the centre; under side infuscate. Length $4-4\frac{1}{2}$ mm.; width 2 mm.

Differs from the preceding species mostly in colouring; the velvety dorsal patch on the elytra is wanting in M. ornatellus, but I have seen a faint trace of it in an example from D'Urban, Natal.

Hab. Cape Colony (Cape Town).

GEN. CREPIDOGASTER, Bohem.,

Insect. Caffr., i., 1843, p. 68.

Mentum without any median tooth and with the lateral lobes much developed; ligula short, broad, truncate at the tip; paraglossæ a little longer than the ligula; palpi short and very thick, the ultimate one of the maxillary obliquely truncate, that of the labial much inflated and broadly securiform; antennæ thick, the joints closely set, the third one as long as the basal one; head ovate; prothorax cordiform, shagreened; elytra short, with or without costæ; and obliquely truncate from the suture to the outer posterior angle; legs massive.

This genus is represented in the Zanzibar mainland by one Hab.species.

Synopsis of Species.

Elvtra with an apical vellowish red patch on each side

| Enjura with an apical yenowish red patch on each side. | |
|--|-----------------|
| A broad apical patch on each side | insignis. |
| A basal band, and an apical patch on each side | bimaculatus. |
| A narrow scutellary yellow band, and an apical patch on each | |
| side | scutellaris. |
| A dorsal black patch on the posterior part | infuscatus. |
| A discoidal fuscous patch, and a round apical yellowish patch | |
| on each side | fusco-plagosus. |
| A basal narrow triangular patch, with part of the suture | |
| yellowish, and a round apical spot on each side | consobrinus. |
| A faint round apical yellowish spot on each side | nonstriatus. |
| Elytra without any yellowish red patches. | |
| Elytra very short, subovate, black, non-striate | ovicollis. |
| Brown, with a black basal band | pusillus. |
| Brown, without any black band | damarensis. |
| Elytra elongated, subcostate or costate | Natalensis. |
| Elytra ovate, shagreened, distinctly costate; head, prothorax, | |
| and elytra black | natalicus. |
| Elytra black, slightly striated | caffer. |
| Elytra black; costæ equal | picipennis. |
| Elytra pale brown; costæ equal | montanus. |
| Elytra pale yellow; three costate on each side | pallidus. |
| Elytra pale brown; five costæ on each side, the alternate ones | |
| higher than the others | costatus. |
| Elytra dark brown, with the suture and outer margins red- | |
| dish; six costæ on each side, the outer one very much raised | rufescens. |
| Elytra yellowish red, with a broad postical black patch ex- | |
| | |

tending from one side to the other; six costæ on each side, with the outer one more raised than the others posticalis.

CREPIDOGASTER INSIGNIS, Pér., Plate VII., fig. 5.

Head, prothorax, palpi, antennæ, and legs brick-red; elytra elongated, ampliated behind, finely shagreened, costate, the costæ narrow and sharp, very briefly pubescent, black or deeply infuscate,

with a broad, more or less ovate, reddish spot extending above the apex from the fourth to the seventh striæ, but disconnected with the outer and also the apical margin; abdomen black, with the central part slightly reddish underneath. Length 6–9 mm.; width 3–4 mm.

In one example from the Transvaal the colour of the head is light brownish red instead of brick-red, and the elytra are fuscous instead of being black.

Hab. Orange Free State (Parys), Transvaal (Potchefstroom, Zoutpansberg).

CREPIDOGASTER BIMACULATUS, Bohem.,

Insect. Caffr., i., 1848, p. 69, pl. i., fig. D.

Head, prothorax, palpi, antennæ, and legs pale brick-red; elytra fuscous black, finely shagreened, broadly but not deeply striated, with a basal yellowish red triangular band, and on each side a large, ovate, subapical macula of the same colour, nearer to the outer margin than to the suture; epipleuræ yellowish; abdomen black above, infuscate underneath, with the central part yellowish red. Length 7 mm.; width 4 mm.

Hab. Natal (? D'Urban).

Closely allied to the preceding species, but has a basal triangular yellowish patch on the elytra.

CREPIDOGASTER SCUTELLARIS.

Size, shape, and sculpture of C. insignis; colour of head, prothorax, abdomen, and legs light yellow instead of dark brick-red; the ovate apical yellow patch on the elytra is the same as in C. insignis and C. bimaculatus, but the black colour of the elytra is darker, and there is round the scutellum a narrow yellow band hardly reaching the sutural part; in C. bimaculatus the whole of the base is yellowish red. Length 6 mm.; width 3 mm.

Hab. Transvaal (Pretoria).

CREPIDOGASTER INFUSCATUS, Dej., Spec. Col., vol. i., p. 296.

Head, prothorax, antennæ, and legs yellowish red; elytra finely shagreened and very slightly striated, with the intervals plane, of the same colour as the head and prothorax, but with a fuscous discoidal patch covering the whole of the postical part of the disk without reaching the apex, and leaving an oval yellowish apical lateral patch. Length 4–5 mm.; width 3–4 mm.

Hab. Cape Colony (?), Transvaal (Pretoria).

CREPIDOGASTER FUSCO-PLAGOSUS, Pér., Trans. S. Afric. Phil. Soc., vol. iii., 1885, p. 76.

Head, prothorax, antennæ, and legs light yellow; elytra elongated, striate, with the striæ punctured and the intervals plane, of the same colour than the head and prothorax, and with a broad dorsal brownish patch produced behind in a broad line alongside the suture to the apex, and also narrowly along the outer margin; owing to the configuration of that dorsal band, each elytron has an oval pale-yellow apical patch; lateral sides of the abdomen underneath infuscate. Length $5-5\frac{1}{2}$ mm.; width 2 mm.

Hab. Cape Colony (Cape Town).

Differs mostly from the preceding species in having the elytra distinctly striate and the striæ punctured.

CREPIDOGASTER CONSOBRINUS.

Head, prothorax, antennæ, and legs pale yellow; elytra short, faintly striate near the suture, briefly pubescent, very dark brown, with a triangular pale yellowish red triangular patch round the scutellum and following each side of the suture to about two-thirds of the length, and an oval patch of the same colour reaching from the outer posterior angle to about half the width of each elytron; abdomen infuscated laterally underneath. Length $4\frac{1}{2}$ mm.; width $2\frac{1}{4}$ mm.

Hab. Cape Colony (Grahamstown).

Resembles C. infuscatus, but the elytra are more distinctly striate and the infuscation rounds the humeral angle.

CREPIDOGASTER NONSTRIATUS, Chaud.,

Monogr. Brach., Ann. Soc. Ent. Belg., 1876, p. 95.

Head, prothorax, antennæ, and legs reddish brown, the two former parts somewhat darker than the rest; elytra short, very faintly striated and very briefly pubescent, black, with an apical pale yellow oval patch reaching from the outer posterior angle to about half the width of each elytron; abdomen infuscated laterally underneath. Length 4 mm.; width 2 mm.

Hab. Cape Colony (Oudtshoorn).

CREPIDOGASTER OVICOLLIS, Chaud.,

Monogr. Brach., Ann. Soc. Ent. Belg., 1876, p. 86.

Head, prothorax, antennæ, and legs pale red; prothorax with the median longitudinal groove hardly discernible; elytra short, finely shagreened, and very briefly pubescent, black, without any trace of striation; abdomen infuscated laterally underneath.

Shape of the preceding species, to which it approximates nearly,

but the elytra are not striated and have no apical yellowish patch. Length 4 mm.; width 2 mm.

Hab. Natal (Frere), Zululand, teste Chaud.

CREPIDOGASTER DAMARENSIS.

Head, prothorax, antennæ, and legs light brown; elytra moderately elongated, of a deeper brown than the prothorax and head, very finely shagreened, without any trace of striation and briefly pubescent; abdomen somewhat infuscate. Length $5\frac{1}{2}$ mm.; width $2\frac{1}{2}$ mm.

An intermediate form between *C. ovicollis* and *C. pusillus*; the elytra are less ovate than on the first-named species, and brown instead of black; it is also differentiated from *C. pusillus*, the colouring of which is nearly similar, in having a well-defined median longitudinal groove on the prothorax; the elytra are also longer, reaching to the penultimate abdominal segment, whereas in *C. pusillus* the three last abdominal segments are uncovered.

Hab. Damaraland.

CREPIDOGASTER PUSILLUS, Pér.,

Trans. S. Afric. Phil. Soc., vol. iv., part ii., 1888, p. 76.

Head, prothorax, antennæ, and legs reddish brown; prothorax with no apparent median groove; elytra very short, a little ampliated, hardly emarginated behind, finely shagreened, without any visible striation or costæ, very briefly pubescent, reddish brown, although of a lighter hue than the head and prothorax, and with a narrow basal infuscate band; abdomen black; apical part of the femora slightly infuscate. Length 3 mm.; width 2 mm.

Hab. Cape Colony (Namaqualand).

CREPIDOGASTER NATALICUS.

Head, with the exception of the labrum, prothorax, and elytra black; antennæ, palpi, apex of the head, and legs pale yellow; elytra ovate, very distinctly shagreened, striated, with the intervals broad and convex; abdomen infuscate. Length 9 mm.; width 4 mm.

The sculpture and shape of the head and prothorax are like C. insignis; the elytra are more ovate, and the intervals between the striæ are more convex and better defined. It is the only South African species of the genus having a black head and prothorax.

Hab. Natal (Frere).

CREPIDOGASTER CAFFER.

Head, prothorax, antennæ, and legs varying between pale and brick-red; elytra elongated, shagreened, briefly pubescent, black,

distinctly striate, with the intervals between the striæ slightly convex; abdomen black underneath or infuscate. Length 6-7 mm.; width 3 mm.

Hab. Cape Colony (Port Elizabeth, Grahamstown, Somerset East).

CREPIDOGASTER MONTANUS.

Head, prothorax, antennæ, legs, and elytra pale brown; elytra elongated, with the apical margin nearly straight and subacute at the sutural part, hardly pubescent, and deeply striato-punctate, with the intervals slightly rounded; abdomen light brown. Length $6\frac{1}{2}$ mm.; width 3 mm.

Hab. Cape Colony (Cape Town).

CREPIDOGASTER PICIPENNIS, Chaud.,

Monogr. Brach., Ann. Soc. Ent. Belg., 1876, p. 94.

Head, prothorax, antennæ, and legs pale red; elytra elongated, shagreened, briefly public public, black, costate, with the costæ of the same height. Length $7\frac{1}{2}$ mm.

Hab. Cape Colony.

CREPIDOGASTER PALLIDUS.

Totally pale yellow; elytra elongated, very slightly emarginated diagonally behind, shagreened, briefly pubescent, and three costate on each side, with the intervals very slightly rounded. Length 6 mm.; width 3 mm.

This species may prove to be only an immature insect. I have, however, seen several examples.

Hab. Cape Colony (Cape Town).

CREPIDOGASTER COSTATUS, Dej.

Aptinus costatus, Dej., Spec. Col., v., p. 411.

Head, prothorax, antennæ, and legs reddish brown ; elytra elongated, of a darker brown than the prothorax, finely shagreened, hardly pubescent, each elytron with five much raised costæ, the first, third, and fifth more raised than the other two, and the fifth the highest of all; abdomen deeply infuscate. Length 5–6 mm.; width 2 mm.

Hab. Cape Colony (Cape Town).

CREPIDOGASTER RUFESCENS, Motsch.,

Plate III., fig. 5.

Etud. Entom., 1862, p. 54; Bull. Mosc., 1864, part iii., p. 214, pl. i., fig. 12.

Head, prothorax, antennæ, and legs dark red; head and prothorax

very roughly shagreened, the latter narrowly edged with black; elytra moderately elongated, brownish black, edged with reddish brown all round, the suture also reddish; each one with six sharp costæ, the outer one much higher than the others and running from base to apex, the intervals very finely granulated; abdomen infuscate. Length 9 mm.; width 4 mm.

Hab. Namaqualand (O'okiep).

CREPIDOGASTER POSTICALIS.

Pale yellow, with a broad postical black patch extending from one side to the other from about the median part and reaching the apical margin; head and prothorax roughly shagreened; elytra dilated behind, each one with six sharp raised costæ, the outer one slightly higher than the others and reaching to a little short of the apex, intervals finely shagreened and very briefly pubescent. Length 6 mm.; width 3 mm.

Allied in shape to the preceding species, but differentiated by the black patch on the elytra; the costæ also are not so much raised.

Hab. Damaraland (Kookarrah).

TRIBE LEBIIDES.

Head oval, narrowed into a neck or not, having two supra-orbital setæ; eves prominent; antennæ with the three basal joints glabrous *; paraglossæ united with the ligula, either as long or slightly longer, but rounded laterally, always more or less densely pilose; labrum transverse, short (Dromius), moderately long (Callida, Cymindoidea, Lebia), or greatly developed (Thyreopterus, &c.); palpi variable, but with the ultimate joints not swollen; prothorax more or less slender, cordate, or elongato-cordate, with the base truncate and the posterior angles sharp, type Calleida, Cylindrocranius, Demetrias, nearly parallel, or not sinuate laterally above the basal part, type Hystrichopus, Dromius, &c., or short and with the median part of the base produced beyond the outer angles, type Lebia, Phlaozetus, and with two lateral setae, one in the anterior part and the other at the basal angle, while in *Pentagonica* the first one is exactly in the middle of the lateral part; elytra depressed, seldom convex (Cylindrocranius, Lebistina), truncate or very deeply sinuate behind; legs slender, moderately long, intermediate ones notched in the male (Lebiidæ, some Pericalidæ), fourth joint of tarsi narrow or broad, incised, lobate, cordiform, or truncate; claws simple, serrulate, or pectinate.

I have tried in vain to find characters that would lead to a division

* Catascopus excepted.

1896.]